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ABSTRACT

Since 1988, considerable state and school/district energies have been devoted to implementing Re:Learning in Pennsylvania. This paper summarizes Re:Learning activities in the school district of Lancaster, in particular, McCaskey High School, which was recognized for the scope and quality of its implementation efforts. Re:Learning is a national effort to redesign the total school system. Based on Theodore Sizer's nine common principles of the Coalition of Essential Schools (CES), it reflects the belief that participants at all levels of education must be engaged in a focused and coordinated effort. Data were collected through interviews with the principal, district science program coordinator, Essential Studies (ES) teacher, higher education liaison, and eight teachers participating in program teaching teams. The school's systematic focus on modifying the curriculum as the way to bring about change was the most crucial aspect of the ES initiative. Recommendations are made to consider ways to distribute the principal's leadership responsibilities; examine the issue of shared power to determine whose needs should be represented and in what manner; address divisions between the faculty and community; involve the entire faculty; consider providing teaching teams with more formal training experiences in team building; and allocating more time for reflection. Overall, McCaskey's accomplishments were impressive. However, the issues faced by the school illustrate that major school reform, even when well-conceived and designed, is complex and problematic. Appendices contain information on McCaskey's program goals, ES proposal, curriculum design, and planning process. (LMI)

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RE:LEARNING IN PENNSYLVANIA:

McCASKEY HIGH SCHOOL,

SCHOOL DISTRICT OF LANCASTER

Produced by:
Research for Better Schools, Inc.

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McCASKEY HIGH SCHOOL,

SCHOOL DISTRICT OF LANCASTER

Produced by:
Research for Better Schools, Inc.

November, 1992

Research for Better Schools, Inc. (RBS) is funded by the U.S. Department of Education to be the Mid-Atlantic Regional Educational Laboratory, serving Pennsylvania, Maryland, Delaware, New Jersey, and the District of Columbia. As one of ten federally-supported regional educational laboratories, RBS' mission for the past 25 years has been to collaborate with state, intermediate, and local educational agencies to improve district, school, and classroom practice. RBS is a non-profit corporation, governed by a Board of Directors made up of educational and community leaders from its region.

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The report is based on extensive interviews conducted by Research for Better Schools, Inc. (RBS) with the following individuals:

- Mr. John O. Syphard, Jr., Principal, McCaskey High School
- Ms. Jane Krepp, Essential Studies Teacher, McCaskey High School
- Mr. Daniel McGary, Science Program Coordinator, School District of Lancaster
- Ms. Cheryl Desmond, Higher Education Re:Learning Liaison, Millersville University.

Each of the above individuals was queried at length regarding their Re:Learning role and experiences, and their perceptions of the initiative's progress. They are to be particularly commended and thanked for their cooperation in participating in the interview process, and for their efforts in reviewing the final draft of the report.

Additionally, the teachers who constituted the two teaching teams engaged in the school's Re:Learning initiative in 1991-92 were interviewed as a group by RBS staff and the state Re:Learning coordinator. The teams were comprised of the following teachers:

Team 1		Team 2
Valerie Perry	(English)	Dennis Schmid
Cynthia Dinsmore	(Science)	David Harnish
Michael Gerling	(Social Studies)	Jane Krepp
Thomas Holben	(Mathematics)	Jo Stokes

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Edward M. Patrick
Research for Better Schools

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INTRODUCTION

This introduction describes the rationale underlying the preparation of this report, presents a description of Re:Learning, provides a brief overview of Re:Learning in Pennsylvania, and describes the report methodology and organization.

Report Rationale

Since late 1988, considerable state and school/district energies have been devoted to implementing Re:Learning in Pennsylvania. Re:Learning in Pennsylvania: A Status Report (October 1990), provided a description of Pennsylvania state and district activities during the first two years (1988-89 and 1989-90 school years) of the Re:Learning initiative. Re:Learning in Pennsylvania: 1990-91 Status Report (February 1992), provided an overview of the state's activities in the third year of the project, and presented detailed descriptions of the activities of the nine school sites involved in the "development" phase of Re:Learning. The report also summarized the progress made by the development sites, and reflected on those factors which seemed to either facilitate or constrain their progress.

This report on the School District of Lancaster and McCaskey High School represents a continuation of RBS' Re:Learning documentation work in Pennsylvania. The School District of Lancaster and McCaskey High School, in particular, were recommended for study by the state Re:Learning coordinator due to the scope and quality of the school's implementation activities and the nature of the support services brought to bear by the district. It was felt that Lancaster might serve as a "lighthouse" example of "one way" to approach Re:Learning, and that other sites might benefit from reading about Lancaster's activities and experiences.

Description of Re:Learning

Re:Learning is a national effort to redesign the total school system. It is based on Theodore Sizer's nine common principles of the Coalition of Essential Schools (CES), as stated in Horace's Compromise: The Dilemma of the American High School (1984). It reflects the belief that if schools are to achieve their primary purpose -- to help all students learn to use their minds well -- participants at all levels of education, from the state house to the school house, must be engaged in a focused and coordinated effort. The title "Re:Learning" reflects the partnership formed in late 1987 between the Education Commission of the States (ECS) and the Coalition of Essential Schools (CES). Their goal was to help educators rethink pedagogies, curricula, structures, and environments of education toward to the end of helping all students learn to use their minds well. Hence, the title captures the bottom line, "changes with regard to learning," and how learning can be facilitated or strengthened in schools.

ECS and CES are working jointly to disseminate and support this restructuring initiative. One key aspect of the joint venture has been to influence states to engage in the Re:Learning movement. ECS' role in this partnership has been to work with governors, legislators, and policymakers,

while CES staff work with schools. To date, nine states are participating in Re:Learning: Arkansas, Colorado, Delaware, Illinois, Indiana, Maine, New Mexico, Pennsylvania, and Rhode Island. In addition to its Re:Learning partnership with ECS, the Coalition (CES) continues to to exist as a separate school-university partnership with some 100 secondary schools committed to implementing Sizer's principles.

There is no correct model or "canned program" to implement in Re:Learning. Rather, it consists of a process wherein each participating school decides how it will go about adapting CES' nine principles to its specific context. In that regard, Re:Learning school staff work to create schools that have:

- an intellectual focus geared toward helping students use their minds well
- simple goals wherein students master a limited number of essential skills and knowledge
- universal goals that apply to all students
- personalized teaching/learning procedures, and site-based instructional decisionmaking
- students engaged as workers learning-to-learn, with teachers playing a coaching role
- diplomas awarded upon successful exhibitions of mastery of essential skills and knowledge
- climates or tones that reflect trust, strong expectations, fairness, and mutual respect
- staff engaged in multiple roles as generalist first and specialists second
- budgets wherein per-pupil-costs are no more than ten percent above those of traditional schools.

Re:Learning has placed a number of conditions on both states and schools which must be met before they can be recognized officially as Re:Learning states/schools. These conditions involve a state commitment to allocate time (5 years), dollars, staff, and a leadership structure that will support the implementation of the nine common principles in at least ten schools in a given state. At the district/school level, a school's faculty must commit the time, staff, and resources needed to engage in extensive study, planning, development, and implementation to redesign the school based on CES' principles over a multi-year period.

Overview of Re:Learning In Pennsylvania

The Pennsylvania Department of Education (PDE) commenced its investigation of Re:Learning in August 1988, and officially became a Re:Learning state in July 1989. In the first two years of its involvement in Re:Learning (i.e., summer of

1988 through the summer of 1990), PDE established a management structure for Re:Learning; appointed a full-time Re:Learning state coordinator; established a state cadre and an advisory committee; sponsored a variety of Re:Learning-related awareness, training, and networking workshops or meetings for interested and involved school districts; provided annual "seed" monies, commencing in the fall of 1989, to school districts that committed to participating in Re:Learning (i.e., ten school sites in eight districts in the early part of 1989, and twelve more school sites in eight additional districts in 1990); engaged in a partnership with the Pennsylvania Academy for the Profession of Teaching (PAPT) to foster both district and higher education involvement in Re:Learning; promoted Re:Learning both within PDE and across the state; and collaborated intensively with representatives of CES and ECS.

The state's priorities for the 1990-91 and 1991-92 school years were to: continue to fiscally and technically support 23 Re:Learning schools; increase statewide interest in Re:Learning, and spread the message that the school's primary mission is to help children learn how to learn; integrate and coordinate higher education's involvement in Re:Learning to ensure that new teachers will come to schools ready to help children learn to learn; extend efforts to expand Re:Learning by seeking private sector support, leadership, and funding; continue to build upon the integration of Re:Learning principles in other bureaus and initiatives within PDE; and develop a coalition of key educational associations willing to support schools' restructuring activities.

The primary responsibility for accomplishing the state's priorities and carrying out the day-to-day operations of the Re:Learning initiative at the state level rested with the Re:Learning state coordinator, Ms. Jean di Sabatino. Among other activities, the state coordinator administered the funds provided by PDE to participating districts. In that regard, PDE provided the following levels of funding support to Re:Learning districts in 1990-91: $14,000 to each of the eight original districts, $7,000 to each of the twelve districts that joined in 1990, and $3,000 to three districts to engage in exploratory activities. In 1991-92 the level of funding provided to sites that had been involved in Re:Learning for a year or more was: $7,000 each to 14 sites, and $10,000 each to 6 sites. The monies were allocated for additional curriculum, implementation and expansion work. Two new school sites also received $3,000 each to engage in exploratory activities (e.g., sending staff to "teacher conversation" meetings and/or the Pennsylvania TREK). Additional funding support included: $2,000 to each of six schools for advanced curriculum/assessment work; $16,000 to fund the summer training of eight school staff in the areas of authentic assessment and school coaching at Brown University. Five sites were also channeled into other state funding sources and received grants of from $7,000 to $15,000 to develop community service programs.

The state Re:Learning plans for 1990-91 and 1991-92 outlined a wide range of proposed activities to address the state's priorities. For example, in 1990-92, the Re:Learning state coordinator sponsored and funded annually several professional development and/or networking activities for district Re:Learning staff which focused on various themes (e.g., communications, curriculum development, student centered learning, assessment, community service). Specifically, she sponsored several one-day "conversation" meetings (for teachers, for principals, and combined teacher-principal meetings); organized

annually, week-long summer curriculum institutes for cross-discipline teams of Re:Learning staff designed to guide the participants through a backward planning process for writing interdisciplinary curriculum based on essential questions and student outcomes; organized a week-long summer institute on authentic assessment in 1992; and sponsored each summer a six-day TREK designed to build a school staff's capacity to effect local change. All of the above activities were designed to include teams of people, be highly participatory, include time to discuss issues and team strategies, provide cumulative experiences, and provide opportunities for camaraderie.

The Re:Learning state coordinator also conducted meetings of the state advisory committee triannually; cultivated support for Re:Learning across other PDE work units; obtained a small grant from the Southwest Bell Education Foundation which was used to send several PDE staff to a policymakers' seminar on "improving communications;" interacted with the press; maintained close liaisons with CES, ECS, and PAPT staff; and interacted extensively with school district staff engaged in Re:Learning.

With respect to this last activity, the Re:Learning state coordinator made it a point to visit all Re:Learning sites in the state at least once annually, and multiple visits were made to many of the sites. On a number of the site visits, the coordinator was accompanied by a CES and/or an ECS staff person. The major purposes of the visits were to provide encouragement and personal support for the schools, become acquainted with the activities in which they were engaged, provide technical/networking assistance, and act as a "critical friend." The coordinator and her CES and ECS associates usually provided suggestions to school staff, when asked. They preferred using a Socratic approach when asked for assistance, and typically posed questions or offered suggestions aimed at helping school participants clarify, define, and resolve their own problems.

Report Methodology and Organization

Methodology

The information presented in this report is based upon a total of 14 hours of systematic interviews, conducted over a several day period in late May through mid-June 1992, with the following individuals or groups: high school principal (2.5 hours), district science program coordinator (3.5 hours), "Essential Studies" teacher (4 hours), higher education liaison (2 hours), and two "Essential Studies" teaching teams (8 teachers -- 2 hours). All but one of the interviews were conducted in person. Follow-up phone calls were made in several cases for clarification purposes. In addition to the interview data, approximately 200 pages of program-related materials (e.g., planning documents, briefing materials, curriculum materials) were collected and analyzed.

Organization

The report is preceded by a demographic profile of the School District of Lancaster to provide the reader with general background information on the nature of the school district.

The main body of the report consists of five major sections:

- The first major section presents a "summarized chronological description" of the major Re:Learning-related events/activities that transpired in Lancaster. The section provides a "broad picture" of how the major elements of the initiative unfolded over time and how particular events/activities were inter-related. Also addressed are perceived enablers and barriers, major accomplishments, and the principal's reflection on the proposed expansion and refinement of the initiative.

- The second major section presents a "more focused or detailed description" of the operational details of the initiative (i.e., organizational and governance structure; teaching team's organization, classroom implementation activities, and structural changes; and staff development/support structures, and funding).

- The third major section focuses on the teaching team's reactions to Re:Learning. The team's perceptions of students' and parents' reactions are also cited.

- The fourth major section offers detailed information on a crucial aspect of Lancaster's Re:Learning initiative, its structure and process for curriculum revision/development. This aspect of Lancaster's endeavors was presented separately from the other areas of the report due to the detailed nature of the information and the length of the illustrations and examples (sample materials are appended).

- The fifth major section describes the goals, activities, and plans of a Millersville University faculty member who worked in liaison with the district as part of the state's higher education/Re:Learning partnership.

The report concludes with an analysis of McCaskey's progress, viewed from the perspective of the "Causal Lens," an analytic tool borrowed from CES' TREK materials. Issues derived from the analysis are offered for the district's consideration. A brief commentary on the issues and the complex nature of educational reform closes the report.

It should be noted that quotes from those interviewed are included wherever appropriate in the report to make the descriptions of the activities and events more vivid and impart a fuller understanding of McCaskey's restructuring initiative from the perspective of the participants.

It should also be noted that Lancaster/McCaskey staff refer to their involvement in the Coalition of Essential Schools/Re:Learning initiative as the "Essential Studies" (ES) program or initiative. The abbreviation "ES," therefore, is used in place of CES/Re:Learning throughout the body of the report for the sake of brevity.

DEMOGRAPHIC PROFILE

School District of Lancaster

Schools: 13 elementary, 4 middle, 1 high school, 1 alternative school

Student Enrollment: 10,750

Student Population: 46.1% white, 18.3% black, 35.6% Hispanic

Average Per-Pupil Expenditure: $6,025

Number of Teachers: 412 elementary, 191 middle, 139 secondary

Length of Teaching Service:

1-3 years:	11.1%
4-10 years:	22.2%
10+ years:	66.7%

Number of Administrators and Supervisors:

1 Superintendent	22 Supervisors or Coordinators
1 Assistant Superintendent	12 Department Heads
19 Principals	2 Directors
9 Assistant Principals	1 Manager of Information Systems

School Involved in Re:Learning:

McCaskey High School, grades 10-12, 1760 students, 94 classroom teachers

High School Staff and Students Involved in Re:Learning:

3 families/2 teaching teams per family, 24* teachers, approx. 600 students

*Not including support: 2 counselors, administrator assigned to each team, IMC staff, Writing Center staff, department facilitators, and district program coordinators

Recent District Improvement Efforts:

Elementary school-wide project at Carter MacRae, King and Washington elementary schools; Price elementary school-wide arts initiative; district reorganization plan; strategic plan; 8-day summer management inservice; establishment of a professional center in the district; and the Coalition of Essential Schools initiative.

Most Recent Visible/Controversial School Issues:

1991-92 hiring of Superintendent; implementation of CES for entire sophomore class; movement toward site-based/zero-based budgeting; district reorganization plan; and the Elementary Cluster program.

Description of the Community:

Located in Lancaster County, in the heart of the Pennsylvania Dutch Country, Lancaster is noted for its rich historical background, convenient location proximate to several major metropolitan areas (Philadelphia, Baltimore, Washington), diversified and stable economy, and comfortable living environment. It offers all the conveniences of a large city in a beautiful country setting noted for its many vacation attractions. Overall, the city is a composite rural, suburban, and urban community. Over the past ten years, however, the city has become more urban, and more racially, ethnically, and economically diverse.

CHRONOLOGICAL DESCRIPTION OF MAJOR EVENTS/ACTIVITIES

This section presents a summarized chronological description of the key events/activities that unfolded in the course of McCaskey's implementation of its vision of CES/Re:Learning (or "Essential Studies"). Described are the following: the origins of McCaskey's involvement in Essential Studies (ES), McCaskey's curriculum work and preparations in the 1990-91 school year, activities in the summer of 1991, implementation/planning activities and political issues in the 1991-92 school year, and activities in the summer of 1992. A review of the conditions and factors which either contributed to or detracted from McCaskey's progress is also presented. The section concludes with a summary of McCaskey's accomplishments and the principal's reflections on the expansion of the initiative.

Origins of McCaskey's Involvement in Re:Learning

The principal's leadership, the emerging climate for change in the school, and the district's participation in a CES TREK are important to understanding why McCaskey became involved in Re:Learning/ES.

Principal's Leadership

McCaskey primarily became involved in ES due to the interests and leadership of the principal. Concerned with the number of students "not making it in the traditional system," and concerned with the "changes in the student population," the principal recognized the need for significant changes in McCaskey's schooling practices "if all students were to be successful." In particular, the principal wanted to increase instructional standards and expectations for all students, and, in effect, "to wipe out the bottom for all groups of kids." According to the ES teacher interviewed: "The principal continues to be the visionary behind the ES initiative. He's truly interested in education. He's not just a business manager. He keeps abreast of the current research on educational reform and change. He recognized the need to move things forward at McCaskey and took the lead. He got us started in the cooperative learning sessions and it grew into a need to restructure the entire school."

An important point to make with regard to the above, and the activities to be described below, is that the activities that transpired at McCaskey would not have been possible if it were not for the initial and continuing support provided by the district central office and the school board.

Emerging Climate for Change

The climate for the school's involvement in ES was set, in part, by several antecedent initiatives fostered by the principal. For several years prior to the school's involvement in ES, the principal had engaged in a form of participatory management with McCaskey's five teacher "department facilitators" (one each in science, math, social studies, English, and physical education/health). The facilitators teach four periods a day, have three periods a day in which to serve as "lead teachers" in an instructional support capacity (e.g., they interact with central office curriculum staff, engage in some departmental budget work, disseminate information, serve as cooperative learning coaches,

assist teachers with instructional matters, and link the principal to each of the departments), and meet regularly with the principal to discuss specific school initiatives and schooling in general (a minimum of one and one-half hours per week).

As an outgrowth of the above interaction with the facilitators, the principal initiated several rounds of training in cooperative learning in the school years 1988-89 and 1989-90 for the high school faculty and facilitators. By the late summer of 1989, the school offered its own workshop on peer coaching in the context of cooperative learning for 25 staff and the facilitators. The principal noted that this event was significant in that, "It was the first occurrence [in the school] which promoted systematic collaboration across the staff." Subsequent discussion in 1989-90 of schooling in general, the effects of cooperative learning, and peer coaching, and subsequent reading/discussion of the Coalition of Essential Schools (CES) materials led the principal and the facilitators' group to the conclusion that the changes espoused by CES were compatible with the type of learning/teaching climate McCaskey was interested in fostering. CES was seen as melding well with the school's cooperative learning initiative, and as being compatible with the leadership group's views of effective schooling.

TREK Participation

Accordingly, the principal took the lead in the spring of 1990 to put together a team to participate in CES' June 1990 TREK in Boulder, Colorado. The team consisted of the principal, the district's director of curriculum, the district's science program (curriculum) coordinator, and three teacher (department) facilitators (English, science, and social studies). All team members were volunteers and all had participated in earlier rounds of discussion regarding CES' potential applicability to McCaskey. At the TREK, McCaskey's team felt that it knew what needed to be done. As the principal indicated: "We were ready! We decided to do it! We already had a good idea of the things we wanted to change when we got back. We were in agreement with CES' principles. They are right on -- not faddish -- not new -- someone put it together and grouped it and gave it some force."

By the end of the TREK, the team produced the following:

- two common goals that describe the mission of the school, and four essential skills that describe the means to achieve the common goals (see Appendix A)
- four action plans in the areas of communication, curriculum, teacher change, and student change
- a working conception of an implementation format (i.e., commence implementation in the 1991-92 school year with a cross-section of 200 tenth graders, and involve two teams of four teachers each -- biology, communication arts, math, and social studies -- in the delivery of CES-based instruction).

Additionally, the team decided that the 1990-91 school year would be devoted to getting ready for implementation in 1991-92. A key decision was made at the TREK to concentrate on "the curriculum" as "the way" to bring about the

change that had to occur. According to the district science program coordinator: "Teachers see the curriculum as central or most relevant. At the TREK, we looked at the existing curriculum and contrasted it to what CES proposes. We thought that the most obvious change would be to depart from the tradition of individual departments teaching their content, and to move toward some level of integration. We also recognized that the current curriculum needed to be modified in terms of the amount of content it had. Three key ideas prevailed. First, move toward curriculum integration. Second, move away from the coverage of a large amount of content. Third, move toward assessment by performance; you can't separate curriculum from assessment."

By the end of the TREK, McCaskey's team felt it had made substantial progress. The principal turned over the lead for structuring and managing the curriculum revision/development work to the district science program coordinator (central office curriculum staff member) and took the lead in acting on the other multiple aspects of the district's approach to CES.

TREK Follow-Up

Several working meetings were held during the summer of 1990 to follow up on the TREK. The teacher facilitators and others not at the TREK were briefed by the principal and other TREK participants regarding the outcomes of the TREK and proposed plans, and were invited to provide their input. The TREK products were modified, clarified, and acted upon. The principal selected eight classroom teachers for the two teaching teams. Nominations were submitted by central office curriculum staff, teacher facilitators, and high school administrators. Teachers who had exhibited leadership and shown initiative in using cooperative learning techniques were invited to participate in the ES initiative. Additionally, nine days of curriculum revision/development work were scheduled for 1990-91. Proposed curriculum revision participants included: the eight classroom teachers, the five teacher facilitators, central office (curriculum) program coordinators in four subject areas, the high school librarian, the district coordinator for media services, the district director of curriculum, and the high school principal.

Curriculum Work and Preparations: 1990-91 School Year

High school and central office staff engaged in extensive preparations during the 1990-91 school year. Attention was focused on the development of a conceptual framework for revising the curriculum, staff development, curriculum revision/interdisciplinary course development, and communications.

Framework for Curriculum Revision/Development

The central office science program coordinator devised a conceptual framework for the development of theme-based interdisciplinary curricula, tied to two common board-approved ES goals and four essential skills (September 1990). The framework acknowledges CES' nine common principles and a related school-wide vision statement as the overriding contextual umbrella for curriculum/instruction development. The framework then posits that essential skills and essential knowledge (course generalizations, content topics, and objectives) need to be defined and delimited in relation to the two common board-approved ES goals. Having that aspect in place, as a base or foundation, the framework then

proceeds to the development of theme-based interdisciplinary integrated curriculum involving projects, classroom activities, specific teaching methodologies, and assessment -- incorporating selected aspects of the essential knowledge and focused on the long term development of the essential skills. [More detailed information on the district's curriculum development/revision framework or process is presented later in this report, in the section titled "Essential Studies Curriculum: Development Process and Content."]

Staff Development and Curriculum Revision

The district's commitment to the ES initiative is reflected in the time and resources that were allocated to its development. Specifically, two Act 80 staff development days were used in September and October 1990 to introduce the teaching teams to CES' principles and the curriculum revision framework. By the end of the two days, the teaching teams: (1) revised and condensed (in outline form) the tenth-grade courses of study in English, science, social studies, and math (using the goals framework), (2) became aware of the commonalities among courses and the potential for the integration of subjects, and (3) understood the need for continued curriculum development and associated activities.

Four district "professional center" program days were used in January 1991 to continue with the curriculum revision/development process. District curriculum staff and the two teams identified four themes on which to base the tenth-grade core curriculum, developed classroom activities for all four themes, assigned content responsibilities among the teams for the first two themes, and produced a general timetable for the completion of the activities during the 1991-92 school year. The four themes selected to serve as general organizers for integrating the curriculum were: Human Curiosity and the Search for Answers, Conflict and Conflict Resolution, Technology and Life Choices, and Futures for Life and Matter.

Work was continued (two days in March and another in June 1991) on the completion of the activities for the last two themes. By the end of June 1991, after a total of nine formal days of work, the teaching teams and curriculum staff essentially had the tenth grade ES curriculum for the 1991-92 school year down on paper, and the teaching teams had laid out specific plans for the first six to eight weeks of school. District curriculum staff assisted, as needed.

Communications

Efforts to promote the ES initiative and inform the staff and community of ES-related activities/plans in the first year of the initiative proceeded, according to the ES teacher, as follows: "The initiative was promoted in several ways. The school newsletter for parents, 'The Update,' included several small pieces on CES/ES. A promotional brochure describing CES/Re:Learning and McCaskey's ES initiative was also prepared, and handed out at information sessions conducted for the ninth graders in the spring of the year. The brochure was subsequently used by the district in meetings with parents. Additionally, a general information session was conducted in the late spring to inform parents of the direction in which the school was going."

The ES teacher continued: "Internally, staff were informed of ES' progress at the mandatory monthly faculty meetings, and the principal scheduled three or four information 'question and answer' sessions for staff either before or after

school. The two teaching teams and the principal also conducted a formal briefing in the late spring of 1991 for the entire high school faculty to provide them an overview of ongoing ES activities and plans. A lot of "one-on-one" communications with the faculty were also engaged in by the facilitators, team members, and the principal."

Summer Activities: 1991

ES-related activities in the summer of 1991 included: a retreat by the teaching teams to engage in teambuilding and preparations for the coming school year, student scheduling, and curriculum work and planning.

Team Retreat

The teaching teams participated in a one-week working retreat at an off-campus site. The agenda included: team building activities, in-depth training and preparations for performance assessment, detailed preparations for the first two weeks of school (including a team assignments checklist regarding class activities and logistical matters), and preparations for meetings with parents to be conducted in late August.

Student Scheduling

Work on scheduling students for the two teams progressed through the summer of 1991. The initial intent was to have a generally heterogeneous group of students enroll in ES for the 1991-92 school year. The principal and ES staff, however, did not feel that they could include both biology and chemistry in the first year of the ES initiative. Therefore, they decided to offer biology, math, English, and social studies as the core curriculum for the tenth-grade ES students. That decision precluded four sections of the most gifted "Track 1" ninth-graders from participating in ES as tenth-graders. Ultimately, about 160 (instead of the planned 200) students were enrolled in the ES program by their parents. Of these, about thirty percent were "Track 1" students (college bound) and seventy percent were "partnership" students (students who traditionally have fared less well in school, and have not been college bound).* This enrollment distribution ultimately had implications for how the program was perceived and received by the public in the 1991-92 school year. According to the principal, "A vocal segment of the community saw ES as a dropout prevention program; a program that was not geared to the needs of the top academic students."

Curriculum Work and Planning

The district curriculum staff continued writing and planning during the summer, and worked on extending the ES program into additional subject areas for the 1992-93 school year.

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*Five large business corporations in the Lancaster area formed a partnership with the Lancaster Area School District to the end of supporting minority education. Any minority student who graduates with a 2.5 average is assured of free admission to Millersville University, with the "partnership" paying the tuition.

Implementation, Expansion, and Politics: 1991-92 School Year

Major activities or events in the 1991-92 school year included the preparation of a vision statement by the school staff, the emergence of a controversy over class size, and the implementation of the ES initiative by the teaching teams. These are described below along with discussions of a major political controversy that arose over the planned expansion of the initiative, staff reflections on the reasons for the controversy, and the impact of the controversy on the teaching teams. A review of plans to expand the initiative and related preparations concludes the section.

Vision Statement

In an effort to tie the larger body of faculty into the ES initiative, the principal and the ES leadership group engaged the entire high school faculty in writing a CES-based vision statement for the school in early September 1991. Representative members of the student body and parent/community groups were also invited to participate in the process. The vision statement, which was generally well supported by the faculty, was to set the tone for a new or renewed order of expectations regarding schooling, students' performance, instruction, and school climate at McCaskey. The vision statement reads as follows:

> Since change is inevitable and accelerating, students should leave McCaskey with the love of life-long learning. In order to be a contributing member of this dynamic society, each graduate will emerge articulate, ethically sound, able to deal with real life challenges, aware of global and environmental issues, and have a strong sense of personal and civic responsibility. McCaskey High School will foster a caring environment that celebrates all cultures and promotes successful learning for all students in an atmosphere of respect.

Class Size Controversy

Relations between the ES staff and the rest of the faculty appeared to be off to a fine start until the class size list came out shortly after school started. The ES staff generally had lower class enrollments than the rest of the faculty due to fewer students being enrolled in ES by their parents than had been expected. This factor, along with the substantial attention and acclaim the ES staff were receiving, led to considerable unrest among large segments of the non-ES faculty, and resulted in significant tensions between the ES staff and the rest of the faculty, with elements of the latter group directing a fair amount of animosity toward the ES staff.

ES Implementation

As the year progressed, the two ES teaching teams had to deal with considerable internal and external political pressure. Nevertheless, the two teams of four commenced their CES-based activities and instruction. The ES teachers met regularly (usually daily) as a team of eight throughout the year, to discuss and coordinate their work. They modified their approach to

instruction, letting the students assume significant responsibility for their own learning. They also implemented the revised theme-based interdisciplinary curriculum, engaged the students in a number of curriculum-related performance assessments, conducted daily advisories with the students, and engaged in a variety of other ES-related activities (e.g., they worked with student teachers from proximate Millersville University's education department, and collaborated with Millersville's Re:Learning liaison as a part of the state's plan for connecting higher education with the RL initiative statewide). [More detailed information on the teachers' organization and activities is presented later in this report in the section titled "Operational Details of Re:Learning at McCaskey." Similarly, more detailed information on the teachers' reactions to ES and the higher education liaison's activities are presented in the sections titled "Reactions to Re:Learning," and "McCaskey's Higher Education Liaison," respectively.]

Political Controversy and Issues

The political controversy alluded to above became highly visible in the period November 1991 through February 1992. The high school principal and selected central office staff had kept the board informed of the activities and goals of the ES program since its inception. In support of the initiative, the curriculum committee of the board adopted a resolution in October 1991 to make the program mandatory for all tenth-graders in the 1992-93 school year. At a full meeting of the board in November 1991, the resolution met with some unexpectedly strong student and parent opposition when a motion was made for its adoption. The board voted to defer action on the motion until February 1992 in order to permit further study and discussion of its merits.

In the interim period, the following occurred: board members visited the ES classes and acquired information from students and teachers; the local newspaper "featured" a series of investigative-type articles on CES/Re:Learning and McCaskey's ES initiative; the high school principal and other central office staff conducted a series of evening information presentations for parent groups at each of the district's four junior high schools; and the district conducted an evening "open information forum" on CES and ES at McCaskey High School for interested citizens. At the "open forum," a panel of district officials, CES/Re:Learning state representatives, and local and national college officials presented various aspects of the ES program. The high school principal moderated a question-response follow-up session. At the board's open meeting in early February 1992, a number of ES students and parents offered their strong endorsement of the initiative, and the board proceeded to adopt ES for the entire tenth grade starting in the 1992-1993 school year. However, some concessions were made to accommodate the interests of those who had voiced their opposition to ES; namely, advanced students would be able to take selected advanced courses in non-CES/ES settings (i.e., traditional classes).

Overall, the public controversy over CES/ES at McCaskey resulted in more dissension in the community and produced more tensions among staff than any other event in the district within the memory of those involved. The major issues that stirred people's emotions were: Would students in the ES initiative be able to get into the college of their choice? What would happen to the high school's renowned electives and advanced placement classes -- would student be able to take the electives they wanted? Would the ES emphasis on cooperative learning be detrimental to students of higher academic performance? Could the

district afford the smaller class sizes CES calls for? Is the program "Re:Learning/CES" really a remedial program for less advanced students?

Reflections

In retrospect, the controversy was attributed by many of those most actively involved in the initiative to a failure to communicate clearly and specifically how ES would play out in its actual implementation. That is, the "specifics" of the proposal to expand the initiative to the entire tenth-grade were not clarified at the time that the board entertained its initial resolution (e.g., students' elective options, grouping of students, student scheduling options, interface with the ninth and eleventh-grades, interface with existing major courses of study, impact on college admissions, impact on course coverage and rigor). Aspects of the proposed program, therefore, were open to multiple (emotional) interpretations. According to the district science program coordinator: "We made a 'general proposal' [for expansion] but we didn't lay out the specifics on paper at the time. Our plans were evolving and we didn't expect any controversy. We didn't recognize what the problem was until January 1992. Up until that time the real proposal had not been stated. What expansion meant was never spelled out. Once we recognized the problem, we acted to clarify things and drafted an operational statement (see Appendix B) which explained more clearly the ES program proposed for 1992-93."

Additionally, the principal attributed a fair amount of the intra-faculty controversy to the unanticipated "class size issue." He indicated that: "This set a negative tone with the non-ES faculty and it tended to generalize. As the school year progressed, CES/ES was viewed by many faculty as the source of all unhappiness. The disparity in class sizes between ES and non-ES faculty tended to come down as the year progressed due to dropouts. The damage had been done, though. CES/ES became the scapegoat for anyone's discontent with anything. It created problems in the building and in the community. Cooperative learning and CES/ES also became attached and were seen as one and the same. Anytime anything happened, CES/ES took the blame. We have worked hard, however, since February 1992 to establish good relations with all staff."

Impact on Teaching Teams

The political tensions also interdicted, to some extent, the classroom activities of the eight ES teachers. During the period November 1991 through February 1992, their attention was diverted, to a fairly large degree, by the need to deal with and respond to political issues. In the latter third of the year, it became apparent that they would not have the time, due to the political distractions, to implement the last two curriculum themes, as planned. In March 1992, therefore, they spent a day with the curriculum staff at the district "teacher center," and worked out a merger of the two themes which they subsequently implemented during the remainder of the year.

Expansion Plans and Preparations

Concurrent with the above events, the principal, teacher facilitators, and district curriculum staff continued to plan for and act on the refinement and expansion of the ES initiative. Their plan called for the creation of three somewhat heterogeneous "families" of approximately 200 tenth-grade ES students each for the 1992-93 school year. Each family would be instructed by a team of

7 or 8 teachers. Accordingly, the principal recruited, in the fall of 1991, 15 volunteer teachers as prospective members of two additional tenth-grade ES teams for 1992-93. The orientation and training of these prospective new team member commenced with a three day session in December 1991 at the "teacher center." Subsequent preparatory and planning work with and by this group involved three days in April 1992, one day in May, four one-half days in June, and another full day on assessment in June 1992. At the initial meeting with the new team members in December 1991, the principal and curriculum staff introduced the team members to the CES principles and philosophy, and the framework for developing interdisplinary theme-based curricula. The new teams started to write the outlines of their curriculum units in those three days and continued with their curriculum work and other CES-related staff development in their subsequent meetings during the school year.

Summer Activities: 1992

ES-related activities in the summer of 1992 focused on continued curriculum work and staff development, the involvement of support staff, preliminary work on the formation of an assessment support team, and the scheduling of students.

Curriculum and Staff Development

The principal, in cooperation with the district director of curriculum, established a comprehensive schedule of curriculum work and ES-related staff development at the district's "teacher center" for the three ES teams in the summer of 1992. He provided for the following:

- four days of curriculum revision work
- one day on reviewing cooperative learning
- two days on performance assessment
- three days on conflict mediation
- three days on Socratic questioning
- one additional day on cooperative learning.

Overall, the principal related he was very pleased with the high degree of staff involvement in the summer training. Some 24 to 30 volunteer school and/or district staff were consistently involved in the various activities cited above. The principal emphasized the following: "We kept the focus [during the summer training] on the CES philosophy/principles and cooperative learning. We're constantly trying to extend the collaborative process we have in place in order to make teaching an ongoing topic of conversation."

Additionally, the principal participated in a month-long leadership training seminar for principals at the University of Delaware, and one of the ES teachers participated in a week-long CES seminar on assessment at Brown University.

Support Staff Involvement

In addition to the teaching staff (3 teams of 8, 8, and 7 teachers, respectively), and the central office curriculum staff, the principal also involved in the summer training, as needed, several other staff that had served as a "support group" for the ES initiative. These staff included: a special

education teacher, an "English-as-a-Second/Other-Language" teacher, a resource room teacher, the school librarian, the school's Writing Center director, the district's Instructional Materials Center director, and other library media staff. In particular, the Writing Center director, the librarian, and the Instructional Materials Center director participated in the curriculum development sessions. They provided needed support regarding materials, media/technology techniques, and other resources related to curriculum and assessment. The principal stated that, "It's important that they [the latter staff] know the CES/ES content and assist teachers with the processes and methods of various assessment modes and techniques."

Assessment Support Team

In regard to the above, the principal also formed an "assessment support team" during the summer. Its staffing and function is currently under consideration. Realizing the complexities and importance of assessment, he indicated, "I would like someone [on the staff] to emerge as a master in how to structure and grade performance assessments; criteria, rubrics, etc." He added, "I would like a dual grading systems as we transition into CES/ES. I'd like to have one or several rubrics available to reflect students' overall work with regard to the essential skills and objectives."

Student Scheduling

In the late spring and summer, the principal and the assistant principal collaborated on scheduling the tenth-grade ES students' courses for 1992-93. Instead of scheduling students' core courses first (as was done in 1991-92), the assistant principal scheduled the tenth-grade students' electives first (to avoid conflicts with singletons) and then scheduled the students into their core-course groups or "families." The principal noted that: "We started with the electives first because its a big political issue with the community. We need to provide students with as many elective options as they had before the CES/ES initiative. In some cases, the electives chosen will parallel a class family; that is, all the students in a given family will be taking a particular elective in common (e.g., foreign language will be confined to one family)." He added: "Ultimately, we wanted heterogeneous grouping. That's impossible though; the board and the community would object. It would also be impossible to teach if a family were totally heterogeneous. We'll have three sets of 200 kids each grouped as a family; that will capture or reflect heterogeneity in the sense that we'll get a range of abilities across the 200 just due to the size alone."

Enablers and Barriers

The conditions and factors which either contributed positively to, or detracted from the implementation of McCaskey's CES/ES initiative are presented below. Cited are the impressions of the principal and the ES teacher who was interviewed in depth. The teaching team's collective reactions (positive and negative) to the initiative are addressed later in this report in the section titled "Reactions to Re:Learning."

Enablers

The principal offered the following as enablers: "Both the board and the superintendent are supportive of ES but are behind the scenes. The superintendent is an advocate of the program and sees CES/ES as compatible with the current strategic plan and the state's new Chapter 5 requirements. Additionally, there has been a growing change in attitude and philosophy among a significant portion of the school staff, and quite a bit of discussion of restructuring ideas. It's starting to take hold. People are developing a belief in it, and are starting to make it happen regarding positive changes in the classroom. The initial talks with the facilitators and the involved faculty contributed significantly to getting things moving. The district curriculum director and staff have also been willing participants, and have contributed substantially to the effort. We have a very strong internal staff development component. I've been very pleased with the contributions of all involved staff and with their buying into the CES concepts and principles. If I didn't have positive feelings, I wouldn't be moving as fast as I am."

The principal's leadership and "hands-on" involvement were cited as a key enabler by the ES teacher. She also cited the support of the board ("The board's progressive and capable of making difficult decisions. They also took the time to visit our classes and obtain first-hand information about ES."), the district science program coordinator ("He's a very clear and capable thinker."), and the superintendent ("He personally informed us of his support early in the year. He also was supportive during the political warfare later in the year. He indicated at the public board meetings that he supported the expansion of the initiative to the entire tenth-grade. He also participated in the various PTO meetings at the junior highs."). Other enablers or sources of support that were noted by the teacher included: the parents and students who spoke out in support of ES at the January 1992 information session and the February 1992 board meeting; the district's higher education liaison from Millersville University (also a parent in the district) who was influential in getting the proposed change accepted by several key people; the staff development provided by the district; the professional freedom afforded the ES teams by the district to meet off-site; the district's contacts with the Re:Learning state coordinator and the state's support; the support offered by CES/Brown University; and the empathy provided by a small but growing number of non-ES faculty. Lastly, the camaraderie among the teachers on the two ES teams was highlighted as perhaps "the key" source of support which sustained the ES teaching staff throughout the "challenging" first year of the initiative.

Barriers

When asked about the problems or barriers encountered, the principal commented as follows: "I think that 'ignorance', not meant in a negative or pejorative way, has been the biggest barrier. For example, people (some staff and the community) tend to view cooperative learning and CES/ES negatively. There probably are two reasons for the perceptions. First, there are some teachers who don't plan any better for cooperative learning than for any other things (and the feedback to the staff and parents is negative). Second, parents, nationwide, tend to believe strongly that that's not the way you learn. Many think that you only learn the traditional way, when the teacher is up front lecturing the class and dominating the instructional setting; that is, teacher-centered classes with students in a receptive or passive role. We know better

than that. Generally speaking, students learn best in structured, applied situations where they are actively involved in meaningful, motivating tasks that involve some level of structured interaction with their peers, and some responsibility and accountability for directing their own learning -- with the teacher orchestrating the process and serving as a guide and resource."

The principal continued: "Some of our parents were so concerned about cooperative learning and ES that they projected through to the end of high school, and expressed the fear that their children wouldn't be able to get into the school of their choice as a result of it. At the open meetings that we had, we worked to counter peoples' misconceptions. At the meetings we conducted with the junior high parents, for example, we were able to take a look at what they believed teaching to be. Most of them saw 'stand-up' teaching as O.K. We were able to change some of their conceptions, though, and pointed out the disadvantages of 'stand-up' teaching, the need for more cooperative learning activities, and the positive spin-off effects of cooperative learning."

The principal added: "I didn't anticipate the negative community reaction in November, 1991. Some people still do not acknowledge that the program is designed to benefit all students. Many continue to see it as a program in which we're trying to raise the standards for those students who have not been academic students or haven't had academic habits. The CES label and the Re:Learning label haven't helped. 'Re:Learning' has reinforced the wrong conception of the program. That's why we've called our initiative Essential Studies (ES). Its unfortunate. If I had it to do over again, I'd recast it in a different way. If I had presented it as a program for the college bound it might have flown more smoothly. The irony is that we use a lot of the same strategies in our CES/ES program as we use in our gifted program. For example, some of our gifted junior high students recently presented some of their work and accomplishments to the board. As the students were describing their products and the processes and thinking they had engaged in to create them, one of the board members suddenly had an insight and said, 'Hey! This is (just like) the CES/ES program. Those students are doing the same things.'"

In concluding, the principal noted that, "It's misunderstanding and ignorance -- and I'm using the word kindly -- that are the problems. We need to continue to educate our community and staff (regarding the changes needed in education). Currently, there is a 'wait-and-see' attitude."

Major Accomplishments and Reflections on Expansion

A summary of McCaskey's accomplishments and the principal's reflections on the plans to expand the initiative are presented below.

Major Accomplishments

In the two years since CES/ES activities were formally initiated by the staff of McCaskey High School and the School District of Lancaster, the major accomplishments include the following: The establishment of district-based support systems in the areas of interdisciplinary curriculum revision/ development, staff development, and performance assessment; the development of a framework for interdisciplinary curriculum development, and the subsequent development of several tenth-grade theme-based interdisciplinary units by teams

of teachers and central office curriculum staff; the implementation of a CES-based ES program by two four-person teaching teams for 160 tenth-grade students during the 1991-92 school year; the selection and training of 15 additional teachers to implement ES for the entire tenth-grade in 1992-93; the weathering of a significant political controversy over the efficacy of the CES/ES initiative; the ongoing refinement of all aspects of the initiative; and plans for the further expansion of the initiative.

Also cited as significant accomplishments by the principal were: "The fact that so many teachers have changed the way they think about schooling; the very hard work that has been put in by the ES teachers to adjust their teaching methods, and put the CES principles into practice -- their willingness to do it is the reason why we've been so successful; and the fine work of the science program coordinator, and the rest of the curriculum office staff -- I think we have one of the finer CES/ES curriculum programs in the country."

Reflections on Expansion

Regarding the school's/district's plans to refine and expand the ES initiative, the principal commented: "A lot of growth can still occur at the tenth-grade. There's a need for continued refinement of ES at the tenth-grade and a need to integrate as fully as possible the electives program into CES/ES. That alone will be a lot of work. As a district, we are also looking at establishing the CES/ES 'family concept' in the ninth-grade next year [1993-94]. In the eleventh and twelfth-grades, we're envisioning maintaining our specialization/electives program. We want, however, to integrate or incorporate the CES/ES principles and performance assessment into these courses, and are starting to move in that direction. We have a group of teachers at the eleventh-grade who have been developing outcomes-based courses and performance assessment into their curriculum for implementation in the 1992-93 school year. They are not strictly CES, per se, but they are addressing the CES principles."

The principal continued: "We have no cast-in-iron vision yet. We see it [the big CES/ES picture] like a misty field. We have some well founded ideas, and we planfully and systematically try them out; then we adjust as needed. Next year, for example, we're considering bringing some of our teacher facilitators and central office curriculum staff into the CES/ES classes to provide teachers with feedback on curriculum and instruction. We're also concerned with providing our staff with quality training and are assessing training needs. Half of the high school staff still need training in performance assessment and we're gearing up to provide it. Next year, the district's staff development emphasis will be on outcomes-based education, performance assessment, and multicultural education. Additionally, as we're transitioning into CES/ES we're trying to maintain, temporarily, two educational systems. We can't throw out the old one. Little by little, though, we're placing more emphasis on the new one."

OPERATIONAL DETAILS OF RE:LEARNING AT McCASKEY

Described in this section are: the school/district's governance and management structure for ES, the structural changes in students' scheduling, and the organization and activities of the ES teaching teams. Also described are the proposed grouping of students for 1992-93, funding sources, and staff development.

Governance and Management

As was noted in the preceding section, the principal is the acknowledged leader of the ES initiative at McCaskey. As the initiative unfolded, the principal, in essence, put together a "pick-up team" of self-selected, self-starting individuals who were interested in working with him towards realizing the coalition's nine common principles of essential schools. Key staff who initially bought into the initiative included the following: the teacher facilitators; the district director of curriculum and her staff, including the science program (curriculum) coordinator who took the lead in developing a framework for curriculum development/revision; the two teaching teams of four teachers each; and selected professional staff who served in a support capacity. The above school personnel operate as both the de-facto steering committee and the operations/implementation committee for the initiative.

The perspectives of those interviewed on ES' governance/management are summarized as follows. According to the principal: "The initiative's governance is evolving. From the beginning, we've tried to organize both instructionally and procedurally with the staff. We gave the teachers a lot of freedom over the curriculum, instruction, and their daily schedule. For example, the original group of 8 [teachers] was involved in developing the framework for the 1991-92 schedule. Overall, I've provided them [the teachers and other participants] the opportunity to participate in some major decisions such as the hiring of new staff, scheduling, etc. I like to maintain a lot of involvement."

The principal continued: "Generally speaking, I have the opportunity to think universally about ES, and I offer advice or suggestions. The staff go along with a lot of the advice, run with it, and develop ownership. Additionally, this coming year we'll have three teams of teachers [two sub-teams of 4 per team] working independently with three large families of students, and we'll need to attend more to coordinating things so that all teams are working in concert within the context of the same big picture. In anticipation of that, we did some work this summer with the teams on why and how we'll coordinate things."

The (central office) science program coordinator indicated that the ES initiative was a "group effort." He related that: "The principal leads the initiative. Here at the curriculum end, our work or contribution is governed and monitored by the curriculum staff. We initially worked with the teachers on the curriculum, and I served as the primary developer. Once they coalesced as a team, however, they pretty much wanted to be left alone. We [the curriculum staff] wanted it [the initiative and the newly developed curriculum] to be theirs. We acted as helpers only when called on. We never observed the implementation of the curriculum in the class [in 1991-92]. However, we may

play a more direct role as advisors next year, and work in the classes with the teachers. Overall, we [the curriculum staff] probably did more work in 1991-92 on spelling out the expansion details of ES, than work with the team(s)." In concluding, the science program coordinator noted that the district was action-oriented regarding ES. He said: "We have an intense way of doing things [in the district]. We're organized and we wanted to achieve some specific ends regarding ES. If there's a job to be done, we use the people required to do it."

From the ES teacher's perspective, the teachers' daily activities in implementing ES were largely unsupervised. She said: "We have no formal steering committee. Instead, we met periodically with the principal and he tried to address various concerns as they arose. He met with us when we asked. The meetings were primarily initiated by the teams. He also dropped in at times. We met with him perhaps once every three or four weeks for a half hour or more. Overall, the principals oversight was pretty loose. I think they [the principal and central office staff] wanted to empower us to do it."

The ES teacher continued, "We're [the two teaching teams] basically our own steering committee. We ran it ourselves. We perceived our charge to be to apply the nine principles overnight! We were somewhat naive about what we could accomplish. In any event, the team(s) made the day-to-day decisions about students' daily schedules and curricular/instructional activities. We consulted with the principal, as needed. At the next level, we went to the central office periodically and talked with the director of curriculum and the science program coordinator. We also interacted with the teacher facilitators who work hand-in-hand with the principal. They functioned as intermediaries among the members of the teams. Finally, some of the department chair people were also involved, particularly with regard to the problems we had with the non-algebra-ready kids."

The ES teacher also stated that there had been a shift in power. She related: "We have a lot more control over students' day-to-day lives in school. Their daily schedule [the four blocked periods and the advisory period], instruction, and the curriculum are much more under our control. Some decisions, though, are still whole-school decisions. There's been a lot of progress, however, and we've done significantly more curriculum planning. Generally, we're comfortable where we are regarding the decisions we have to make. If we had to engage in any more decision-making than we currently do, it would be overwhelming. We are happy to have the administrators do the traditional things."

Changes in Scheduling

A central feature of McCaskey's implementation of ES was the change in students'/teachers' schedules. McCaskey's schedule consists of seven forty-nine minute periods. Most teachers' daily schedules typically consist of a 15 minute homeroom period at the start of the day, five teaching periods, one duty period, and one "prep" period. Students typically carry five or six courses and transfer from class to class.

The changes made in 1991-92 as a result of tenth-grade ES pilot consisted of the following. Each of the two four-person ES teaching teams (one science,

social studies, math, and English teacher, respectively) were assigned 80 tenth-grade students. The teaching teams' daily schedule consisted of a prep period, a block of four back-to-back periods in which to teach the four major subjects, a team planning period in period six, and an advisory period at the end of the day (period seven).

As a result of the above structural change, the ES teachers had a large block of time (periods two through five) in which to teach the major subjects. Within this block of time they changed the schedule regularly, and frequently scheduled double class periods (90 minutes) to teach a given major subject (i.e., science, social studies, math, or English). With the exception of the two science teachers, the teams were housed together in the same wing of the building. Overall, the above arrangement provided the teaching teams considerable time in which to get to know and collectively deal with their assigned groups of students.

Students, in addition to taking the four major subjects (periods two to five), could elect a course during the first or sixth periods. Physical education was also scheduled during the sixth period. About 25 students, however, opted to take physical education on a "contract basis" to free up the sixth period.

Teaching Teams' Organization and Activities

Information on the ES teaching teams' internal organization/operation, curriculum work, and classroom activities is presented in this section. Also described are the teams' advisory activities and contacts with parents.

Internal Organization/Operation

The two four-person teaching teams were convened initially in September/October 1990 to start work on curriculum revision. The original conception was that they would work separately as two teams and confer as needed. Upon completing a good part of the initial curriculum work in January 1991, the members of the two teams decided that they could work more effectively if they operated as a single team of eight. Beginning in February/March 1991, therefore, the ES teachers subsequently met as a team of eight.

Additionally, in the spring of 1991, as the multiple demands of implementing ES became apparent, the team members decided that there was a need to establish several fixed roles and a meeting structure. One of the team members was selected to be the team's spokesperson and facilitator/chairperson. Another volunteered to handle arrangements for the many visitors interested in viewing McCaskey's ES pilot activities. This same individual also volunteered to do the scheduling for the students every week. A third ES teacher took on the job of being the team's recorder, starting in March of 1991. Detailed minutes of the team's meetings were published weekly in the first half of the 1991-92 school year. The minutes were also shared with the curriculum staff on a regular basis throughout the year. Lastly, one teacher volunteered to function as a liaison with the parents' organization. Her activities commenced prior to the 1991-92 school year. She conducted an information session for parents prior to the beginning of school, set up information sessions two weeks into the school year, and maintained contact through February of 1992.

As a direct result of the distractions caused by the political crisis over ES (November 1991 - February 1992), starting in March 1992, contacts with the parents' organization diminished, the team ceased publishing its minutes on a weekly basis, and the team also lost a member, its spokesperson. In the latter third of the school year, therefore, the team decided to rotate the role of "team chairperson/spokesperson," and also made changes in how the agenda was put together. The team will likely continue to rotate the role of spokesperson in 1992-93.

Regarding its regularly scheduled meetings to discuss curriculum and implementation matters in the course of the 1991-92 school year, the team started out the year by meeting twice daily for 45 minutes from September through December. Once the team felt it had its procedures somewhat established it met only once a day in January, and then cut back to meeting only three times a week in February. Finding that the latter schedule was not sufficient, the team went back to meeting daily for 45 minutes per day for the remainder of the school year. Following the political crisis, the team also modified its weekly agenda, devoting three meetings a week to dealing with "curriculum, kids, and implementation issues," and two to "bureaucratic issues/political problems."

Decisions were generally reached through a process of discussion and group consensus. According to the ES teacher interviewed, there were many points on which the team was in initial agreement. "A typical decision," she stated, "involved the use of the advisory period for students. Questions and suggestions were raised, it was discussed and we decided to use the period for sustained reading one day a week, and for student academic clubs and tutoring/advisory activities the remainder of the week." She added, however, "The team was less successful on reaching consensus with regard to the implementation of the curriculum due to differences in interpretation of the theme outlines prepared in cooperation with the central office curriculum staff. The team did agree on a basic direction and upon who would work with whom regarding a particular joint instructional activity. The details of the instruction were left up to the individuals."

Overall, the ES teacher commented, "There was never enough time during the school year for planning. Adapting and implementing the curriculum on a day-to-day basis was extremely demanding on planning. Most of us planned outside of school."

Curriculum Work

According to the ES teacher, "The initial curriculum design work, however, wasn't that difficult. Traditionally one person is hired in the summer to revise the existing curriculum [for a department]. It's reviewed/approved by the department chair, and published. Under the new process devised by the science program coordinator, the ES teachers now have more power and are the ones who developed the curriculum."

The ES teacher continued: "The curriculum people first went through the old curriculum and tried to boil it down to its essential parts (i.e., discarding the focus on content and emphasizing theory and application). We [the ES teachers] added to, revised, and rewrote the curriculum framework during two inservice days in September and October of 1990. Later in October and in January 1991, we tried writing sample interdisciplinary courses. One team did

'Conflict' and the other did 'Human Curiosity'. After those days in January, that was the last time that we worked as two separate groups of four. We found that we came up with better ideas, and better coordination of the curriculum content when we worked as a group of eight." She concluded: "Generally speaking, as the year progressed we got better at coordinating our instruction with the written curriculum and CES' goals. The science program coordinator worked on the big picture, and we worked on the day-to-day stuff. He helped us keep sight of the big picture. It's an evolving process and is being fine tuned."

Classroom Activities

The ES teachers' classroom activities are best understood if they are prefaced by a description of the ES program. The following description was excerpted from the district's brochure on ES.

Essential Skills for Today

Students must be able to:

1. Use thinking skills and processes in problem solving and learning.
2. Manage and process information in language, artistic, and numerical formats.
3. Integrate information and skills from multiple content areas.
4. Use interpersonal skills in collaborating and interacting with other people.

Basic Program Principles

Critical to student success will be the learning environment that will be established as teachers implement the basic principles of essential schooling.

- Thoughtful learning: Students will be provided with subject matter that will provoke thought and engage them in instructional activities that will accommodate inquiry, analysis, discussion, and information processing.
- Teacher as coach: Teachers will function less as a lecturer, focusing on isolated skills and knowledge, and more as a coach and a problem solver, helping students become productive learners and users of information.
- Integrated curriculum: Just as thinking and learning skills will be integrated across the curriculum, so will subject matter itself be integrated. Knowledge from one subject will be used to strengthen the understanding of another so that students will perceive the world as it is, not as isolated parts.
- Performance assessment: Students will be required to demonstrate (not just indicate by using paper and pencil) their learned knowledge and skills in various types of performances. Beyond showing what they know,

students will be expected to demonstrate what they can do, how effectively they use essential skills as well as course content and processes.

- Personalization: Personalization is a precondition to success. Teachers will work closely with students, assisting not only in their role as academic coach, but also as advisor and mentor, fostering positive concepts of self necessary for students to become responsible, accountable learners.

Structure and Credit

Students will be grouped into teams with four teachers each. The teachers (from English, math, science, and social studies) will be the students' advisors as well as class instructors. Upon successful completion of "Essential Studies," each student will be awarded one credit in each subject area.

In the context of the above preface, the ES teacher provided the following description of the teams' teaching activities: "Our classes were far less teacher-centered and involved much less lecturing. Students' activities were much more research oriented and student directed, and involved significant amounts of cooperative learning and library skills work. We tried to provide for a lot of choices regarding students' mode of working; a few tended to prefer individual work. We engaged in much more 'question-asking' of students, induced them to come up with answers on their own, and directed them to sources of information. We kept asking them, 'Why did you say that?' We fought [with ourselves] to kept from just giving them the answers. It was a struggle on our end not to just tell them. Essentially, we tried to teach the students how to be responsible for their own learning. Having slightly smaller class sizes (14-19) also was helpful in implementing this new approach to instruction."

Regarding the general timeframe of the themes addressed, the ES teacher related that the team(s) spent from September to early December on the "Human Curiosity and the Search for Answers" theme. The theme "Conflict and Conflict Resolution" absorbed their time from December through to the end of February. They also did more subject-driven work in February. Finally, due to the press of time, the last two themes ("Technology and Life Choices" and "Futures for Life and Matter") were merged into one theme, "Future-Technology." This theme was addressed in the period March through the end of May.

In keeping with the changes in curriculum and pedagogy, the ES teachers relied primarily on performance assessments to gauge students' acquisition and application of the skills and content that constituted the essential learning goals for particular lessons/units. In the course of the school year, each student participated in from three to five major "multi-disciplinary" large-scale culminating exhibitions. Some of these were individual performances, some small group (two to four students), and some were large group and/or entire class activities. Each student also participated in eight core-subject-related (English, math, science, social studies) performances in each of the four core subject areas (i.e., two per subject per quarter) during the year. Additionally, some traditional types of tests and quizzes were also used during the year.

Students generally were allowed to choose their own mode(s) of performance (e.g., speech/oral presentations, videotape constructions, skits or performances, essays, visual displays or models), and most student performances or exhibitions were conducted during school time. The teachers used various performance rubrics and checklists to gauge the adequacy of the performances. The ES teacher interviewed used rubrics derived from her former "advanced placement" course work. Other staff used assessment rubrics derived from Wiggins, and/or Stiggins. As one might expect, in the course of the year the ES team members regularly used each other as resources both pre-and-post instruction in order to refine their various approaches to pedagogy and assessment.

Advisory Activities

In the beginning of the year, the ES teachers incorporated planned activities in the advisory period such as brain teasers, communication skills, and tutorials. A combination of planned activities and study hall activities were involved. Additionally, the teachers decided to pull students from both cohorts (or teams) of ES students and place them together in given advisory periods. This decision was reversed by mid-year, and the particular students that a teacher had in an advisory period came from his/her homeroom group. The teacher also had the same students for one of the core subject periods. This meant that the teacher had the same students for two major periods plus a homeroom period per day. Beginning in the second half of the year, the teachers decided to utilize the advisory period for "academic club" activities as well as study hall.

"The team members were least satisfied with how the advisory period worked out," according to the ES teacher. "The disadvantage was that we were seeing the same kids three times a day. Also, the kids are still slaves to grades and it was difficult to hold a discussion [during the advisory period] if the kids knew that they were not being held accountable or graded. Next year we intend to make the advisory period more structured."

Parent Contacts

The ES team made significant outreach efforts to the parents of their tenth-grade students. Prior to the start of school, the team contacted all parents at least twice and scheduled two cookie and tea information meetings. About 50 parents showed up for the meetings. Two of the ES staff also made home visits to each of the parents, and "whole-team" parent conferences were held six times during the school year. Individual parent-teacher conferences were also held with the parents of a few students who were discipline problems in class, and student absences were followed-up with a personal call to the home instead of a recorded call. Similar systematic contacts with ES students' parents are planned for the 1992-93 school year. In fact, it is planned to devote even more attention to parent contacts in the coming year.

Proposed Grouping of Students for 1992-93

Since the initiative has been approved for the entire tenth-grade, McCaskey plans to introduce significant variations in its 1992-93 grouping of ES students. The best description of the proposed grouping of tenth-graders, and the course progression from the ninth (junior high) to the tenth (senior high)

grades, is contained in a presentation made by the principal at the open ES information forum conducted by the district in January 1992. Table 1, provided below, and the accompanying explanation were excerpted verbatim from the principal's written text with his permission.

Table 1

Course Progression and Grouping
Proposed for Grade 10, 1992-93

GRADE 9		GRADE 10
9th Grade Courses		10th Grade Courses and Team Placement
English 9		American Lit and Composition
U.S. Cultures 9	Team A	U.S. Cultures 10
Science 9		Biology
General Math		Algebra 1
English 9		American Lit and Composition
U.S. Culture 9	Team B	U.S. Cultures 10
Science 9		Biology
Any Algebra		Geometry
English 9		American Lit and Composition
U.S. Cultures 9	Team C	U.S. Cultures 10
Biology		Chemistry (Not taught in CES)
Any Algebra or Geometry		Geometry or PreCalculus (Not taught in CES)

"One of the important differences between our current practice and our proposal for next year is in the grouping of students for instruction. Traditionally, students have been grouped (scheduled) in a random fashion based upon their course selections, which have ranged from remedial to advanced placement. We propose to continue to group by course selection, but to do so with important variations."

"Because of the integration of content, teachers will need to be able to plan and teach together. The students they teach, therefore, must also be grouped in a team, or family, or small school format. This grouping will be dictated by grade 9 to 10 course sequencing, specifically in math and science. One major grouping of students, for example, will be formed to accommodate students progressing from general math to algebra 1; these students will form one team (Team A) along with eight teachers -- two each in English, math, science (biology) and social studies."

"The remaining students will be grouped into two other teams. One of these teams (Team B) will consist of students advancing to math and science offerings of geometry and biology. They, of course, would team with eight teachers--again, two each in English, Math, science (biology) and social studies."

"The third team would contain students who are currently taking biology and who, therefore, will be taking chemistry next year; some students within this group also will be taking precalculus instead of geometry. This particular team (Team C) would study the same English and social studies, and most of them would also study geometry; half of the team, however, will study biology and half will study chemistry."

"An important variation in instructional format would occur with the students scheduled for chemistry. The district curriculum office and the high school administration recommend that the core CES program for tenth grade consist of English (American literature and composition), math (algebra 1 and geometry), social studies (U. S. Cultures), and biology. Chemistry and precalculus should be consider part of McCaskey's specialization studies normally beginning in grade 11."

"This means that the students taking chemistry and precalculus, though being part of a team (Team C), would not take chemistry and precalculus as CES courses. These courses would be scheduled separately as part of the traditional schedule."

"Why this kind of grouping? Three reasons. I spoke of the first earlier. Learning experiences that focus on the interrelationship of different content areas will be developed to increase the relevance of the subject matter. Teachers working as a team and teaching a common group of students can design more effective lessons together than they can separately, in isolation."

"Second, the advantages of both heterogeneous and homogenous grouping can be attained in this structure. Within the large group of students there is a wide range of abilities and talents that can be nurtured and used to enhance the abilities and sensibilities of peers. Learning to process information and problem solve across content areas, as well as learning to work effectively with others, can be achieved in heterogeneous groups. Specialized content study and content specific applications of skills and knowledge can be perhaps best achieved in smaller homogeneous groups. This organization for instruction in which the large group team or family can be broken down into smaller study or seminar groups of 20-25 is designed to promote multiple teaching approaches, which, in turn, accommodates multiple learning styles."

"Finally, crucial to the effective reshaping of student-teacher-subject matter relationships is the nurturing of human relationships. Greater personalization is a precondition to success. Teachers, therefore, not only have to collaborate with students in their role as content instructor, they also have to serve as advisor and mentor, fostering positive concepts of self necessary for students to become responsible, accountable learners."

"Returning to my comment on promoting multiple teaching approaches, I believe there is some misunderstanding concerning one particular teaching method--cooperative learning. Cooperative learning is not the sole method of instruction advocated by CES principles. The CES teacher, as any good teacher, makes effective use of lectures, question-answer sessions, demonstrations and labs, individualized study and research and cooperative learning."

"What is encouraged as a means to promote thought provoking classes is the teacher working as a coach and a problem solver, helping students become productive learners and users of information--not functioning primarily as a lecturer focusing on isolated skills and knowledge. Learning cannot be considered as an accumulation of facts; students must become thinkers, workers, much more responsible for their own learning. No longer is it adequate "to cover" content; students must learn independently and collaboratively with others essential skills such as processing, integrating, and connecting information in order to understand the fundamental, essential concepts of interrelated disciplines of knowledge. Teaching strategies must actively engage students, requiring them to search, inquire, examine and discuss. And, ultimately, students must be able to demonstrate their knowledge and skills through performance, not merely through paper and pencil accounting or seat time. Students must be productive thinkers, capable of demonstrating what they can do--not just what they know."

In the course of the interview with RBS staff, the principal elaborated further on the proposed grouping changes. He related: "We've done away with the general math program at the junior and senior high and are phasing in a math sequence in which 'all' students will have algebra 1. Some haven't had it yet. Thus, the approximately 187 students planned for team/family A will have algebra 1 in common. This group will consist of English as a Second or Other Language (ESOL) students, former learning disabled (LD) - type students and resource room students, and students with the TELLS label. Some of these kids will get into the college track, though. We want to raise expectations for them and open doors for them."

"The third group, family C, already have had algebra 1 and algebra 2," the principal continued. "Of these, we have 115 students who will take chemistry. They were our accelerated junior high students. They will take chemistry like they'd take French II, as a regular elective in a regularly structured class. The remaining 85 students will have geometry in common. But, they will be taking the same electives as the other 115 students (also in family C).

"All the other students (remaining tenth graders) will be in family B. These are our 'partnership students'; students who usually have not been college bound."

The principal concluded: "For the most part, we are ungraded at McCaskey. However, some courses have a natural leveling or sorting effect. So, to some extent the students are de facto 'leveled' through practice (course selection/ eligibility), per se. However, we're trying to work away from that in phases."

Funding Sources and Staff Development

The principal reported: "I've used a lot of different sources of money for ES. We had some [state] 'lead teacher' money and we used it for cooperative learning and peer coaching staff development for ES and other staff. We had 'incentive monies' from the state for dropout reduction and we used some of that money. We received seven and ten thousand dollars of Re:Learning funds from the state for the 1990-91 and 1991-92 school years, respectively. We just received the ten thousand and haven't spent it yet. Somehow we've been able to do it; we've been creative. We haven't had any large grants. We've pieced it

together. We've used district monies allocated to our teacher center. The district director of curriculum and I made the decisions on how the monies would be spent to develop staff. This summer we even allocated some of the curriculum office's dollars, along with the new state Re:Learning dollars for ES staff development. Most of the monies to date have been spent to pay for the 23 or 24 ES teachers' salaries during staff development, for presenters' fees, and/or to send teachers off site for staff development."

Overall, the ES staff have engaged in a considerable amount of staff development, in addition to their curriculum development work, in the course of the past two years. At various points in time in that period, multi-day staff development sessions were held in the areas of cooperative learning, performance assessment, and learning styles. Proposed sessions for the summer and/or early fall of 1992 will include: conflict mediation, outcomes based education, Socratic questioning, and multi-cultural education. The district has also developed the capacity to deliver its own staff development in cooperative learning/peer coaching, and is preparing to develop formally that capacity in the area of performance assessment.*

Additionally, several district staff members have received formal training at week-long sessions offered by CES/ECS. Both the district science program coordinator and the teacher facilitator for English have become TREK trainers, and two of the ES teaching staff have participated in City Bank sponsored CES summer institutes on curriculum and instruction. The new assistant high school principal has also participated in CES sponsored training institutes at Brown University. Finally, selected McCaskey ES staff have participated in the one-day teacher and principal "conversations" sponsored by the state Re:Learning coordinator, and have played leadership roles in planning and conducting the week-long Pennsylvania TREKS offered in 1991 and 1992.

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*One of the current teacher facilitators has some expertise in the area of performance assessment, and served as a resource for ES staff during the past two years.

REACTIONS TO RE:LEARNING

The ES teachers' reactions to their participation in the initiative are summarized in this section. Also addressed, to a lesser degree, are the teachers' perceptions of the effects of the initiative on students and parents.

Teachers' Reactions

This summary of the ES teachers' perceptions of their involvement in the ES initiative was based on a two-hour interview conducted with the eight teachers by the Re:Learning state coordinator and RBS staff. The teachers' commentary is summarized under the following three headings: perceived positives, perceived negatives, and perceived team needs.

Perceived Positives

There was general agreement among the ES teachers on the following.

- They found their participation in the ES/CES initiative to be "challenging, exciting, and personally stimulating" -- to the extent that "returning to conventional teaching would be dull and unstimulating."
- They felt that they "grew as a result of the experience" and were "more in touch with their own philosophies of teaching and learning."
- They appreciated/enjoyed the fact that they "were not bound by the traditional coverage of content, had more control over the curriculum, and had control over the flexible scheduling of classes within the blocked time period."
- A tremendous sense of camaraderie developed among the team members; they complemented each others strengths, supported each other during the political crisis period, helped/filled in for each other as needed, generally maintained a positive outlook and sense of humor, developed a strong commitment to one another, and generally worked well together.
- The intense "work week" spent off-site preparing for the 1991-92 school year contributed significantly to both their level of preparation for the year and their cohesion as a team.
- The individual leadership of the team spokesperson/chairperson contributed substantially to the effective operation of the team.
- They became much closer to the students than they would have in a traditional setting, and some attributed a good part of the success of the program to "the close nurturing-type relationships that were developed with the students."
- They were genuinely impressed with and appreciative of the strong level of support they felt they received from the board.

- They were appreciative of the support they received informally from a dozen or so non-ES teachers in the latter half of the year -- teachers who had taken the initiative on their own to attempt to heal some of the rifts among the faculty.

Regarding the above, there were some mixed feelings in the group related to their degrees of comfort in getting close to students, and with teaming. Some teachers were quite comfortable in getting close to the students, while others expressed some discomfort; stating that they preferred to keep a "traditional distance." Similarly, some teachers expressed a preference for team teaching and stated that "they would never want to teach alone again." A few indicated that, although they enjoyed teaming and wanted to continue teaming, it would be nice to have the "freedom" to teach a course or two alone. All teachers agreed that the ES pilot required a tremendous amount of work and planning, and that they all did substantial extra daily preparation at home. One likened the work involved to "the efforts expended during one's first year of teaching." Nonetheless, all viewed the experience quite positively overall.

Perceived Negatives

Among the factors that were perceived less positively by the ES teaching staff were the following.

- Some of the ES teachers felt constrained in that they were limited to teaching sophomores. Several of the staff had previously taught "advanced placement" courses and reported missing the opportunity to teach juniors and seniors.

- Several felt that they were cast into the role of "experts" too soon, reporting that they had been in their pilot roles only a few weeks before being called on to make presentations to others as "experts" on ES/CES.

- There was general agreement that having seven student teachers was too much to handle along with the pilot experience; dealing with the student teachers was too chaotic and unwieldy.

- There was consensus among the teachers regarding their feelings of isolation from the rest of the teaching staff. They reported feeling the general resentment of the rest of the staff, and particularly the resentment or disapproval of the teachers whose classes were most proximate to them. They noted that some 50 faculty members signed a public letter to the board opposing the mandated implementation of ES/CES. They also noted that the faculty council members, although understanding and publicly supportive of the initiative, still tended to maintain a distance, and prefaced comments about ES to the ES teacher representative on the council with, "Don't take this personally, but...!" Their overall impression was that about one-third of the faculty were quiet supporters of the initiative, one-third were neutral, and one-third were strong vocal opponents to change.

  Overall, the ES teachers reported that "they didn't think they were the best teachers or think they were trying to be better than the other faculty -- they were just trying something different." They felt,

however, that many of the other faculty perhaps did not see it that way, and resented the attention that the ES staff received. Consequently, they felt they had to spend an inordinate amount of time on politics during the crisis period (November 1991-February 1992) of the pilot year.

- It had been planned by the administration that the "teacher facilitators" would play a mediating/communications role between the ES staff and the rest of the faculty. The ES staff generally felt that this did not work out as well as planned, and that the facilitators tended to be more reactive than proactive regarding the selling of ES/CES to the rest of the faculty.

- To some extent, the ES teachers felt they were left "kind of hanging in the wind on their own during the political crisis." They felt that the principal's efforts in promoting the program were somewhat neutralized by the personal attacks on him which put him on the defensive. They also reported that the central office curriculum staff, for their own political expediency, tried to remain neutral or "out of" the political dispute -- in order to maintain their multiple ongoing working relationships with faculty across the district. The above factors added to their feeling of isolation and led them to turn inward to their own team members for support.

- Although their working procedures as a team evolved (e.g., procedures for internal leadership, agenda setting, decision-making) and their efforts as a team generally proceeded quite amicably, some team members reported that they were unsure of their role(s) at times and were hesitant to disagree and/or surface negative issues because they didn't want to be seen as "being negative" by the team. It was felt that objective weekly team debriefings were needed.

- There was strong consensus among the team members that "it was too much to try to do it all in the first year" (i.e., develop/refine curriculum, modify pedagogy, develop assessments, entertain visitors, present at meetings, deal with several student teachers, respond to the politics of the situation), and that their "expectations were set too high." Additionally, trying to integrate all four subjects at all times was tremendously demanding and at times frustrating -- particularly in the area of math. In math, students' entering levels were too disparate, and the team eventually resorted to a quasi-grouping of students to accommodate the differences in students' math abilities.

Perceived Team Needs

There was general consensus among the team members on the following items.

- Team members' roles need to be more fully clarified.

- An objective neutral person needs to facilitate a weekly team debriefing. A formalized debriefing mechanism would insure that all relevant issues/feeling get surfaced and dealt with.

- There was no model to follow regarding team processes (e.g., agenda setting, decision-making). Although the team developed its own

procedures, it was felt that more training/guidance in that area might be called for.

- In the past year, it was the team's perception that the principal was spread too thinly to work with the team on a weekly basis, and that he also wanted to empower the team to act on its own. Team members voiced a need to work with an assigned administrator on a weekly basis, and to establish an ES/CES council which would meet with the principal on a weekly basis.

- Team members reported that they could use even more time to work on the curriculum, assessment rubrics, and backward planning in general. They also felt that it would have been helpful if they had first had an outline of the structure of all of the themes. They indicated that, due to the press of the pilot year, they did a lot of their planning on a day-to-day basis, and that group planning took more time. When they tried to integrate subjects, they felt that they achieved less rigor because of the time press. They felt rushed. They indicated they needed more time to draft the assessment rubrics before initiating the projects.

- Team members indicated that they could use another week together, like they had last summer, to plan and coordinate their multiple activities. They also felt that they needed more time to talk about and reflect on their work during the year, perhaps once a month on "early release" days.

- A need for a different sort of library orientation program was also expressed. The ES teachers reported that they spent a considerable amount of time teaching students how to access library resources, and had to constantly revisit and work on that skill area with the students. They indicated that the students needed more training on conducting on-line searches. They felt that they needed to spend more time with the librarian and the "instructional materials center" staff in order to coordinate their needs with the resources/services that these staff had to offer.

- Team members expressed a desire to integrate/coordinate their activities with the "special subjects" teachers (e.g., art, music, home economics, shop). The dilemma was in finding the time to "work things out" due to scheduling conflicts. They saw this as an administrative problem and suggested that the administration attempt to coordinate staff schedules to permit time for interaction between the ES staff and the special subjects staff.

- A need for increased coordination/communication across teams was also expressed, particularly in view of the fact that three teams were scheduled to commence ES activities in 1992-93.

- Finally, they expressed a need for further work on "changing the public's perception of ES/CES." They acknowledged the central importance of students' acquiring content and content application skills. However, they felt that the public was not fully appreciative of the significance of their overriding goal; namely, "to teach students how to teach themselves and become independent, motivated, goal-oriented, lifelong learners."

Students' and Parents' Reactions

The ES teachers' perceptions of the effects of the ES/CES initiative on students and parents were based on their experiences over the course of the year. Their observations were not based on any systematic data collection, although the ES teachers did informally debrief their students toward the end of the school year regarding their feelings about ES/CES and what they felt they had learned. This section, therefore, is not intended to be definitive or all-inclusive with regard to the effects of ES on students and parents; rather, it presents "some" of the teachers' "considered observations" at the close of the 1991-92 school year.

Effects on Students

On the positive side the teachers reported the following.

- Generally, the students took to working with one another and got along together well. There was an aura of cooperation among the students in the ES classes and they generally liked the new (ES) approach. They helped each other with their homework and with video editing among other things.

- They were generally impressed with the quality of students' writing, and the critiques they submitted as part of the debriefing process. The students' written critiques reflected more depth and examples, and were generally well organized. Some students reported, for example, that they learned how to analyze, recite, and explain. Others indicated that they had learned, among other things, how to write a thesis paper; preface, body, examples, and conclusions.

- Students liked not having traditional-type tests and quizzes throughout the year.

- Students had mixed reactions to the teachers' Socratic approach to instruction (i.e., not giving students the answers to questions, but following up with clarifying questions and guiding students to reference sources and their own answers); some students liked this approach and others did not. Some students were still clinging to their traditional expectations of teachers and were afraid of the changes. On the other hand, other students realized and developed an appreciation of "what the teachers were trying to do" at various points during the year.

- Some students reported that "they learned how to tolerate other people."

On the negative side the teachers reported the following.

- Some of the students reported that "they got tired at times of helping the slower students in the group."

- They also tended to feel the isolation of being in the ES classes with the same teachers for most of the day, and indicated that they didn't have a chance to get to know the students in the rest of the classes in the high school. This was their number one complaint. They did concur, however, that they got to know their ES classmates much better than they usually get to know their schoolmates.

On balance, the teachers were not sure of the full impact of the ES initiative on the students, and felt it was too soon to make cast-in-iron assessments. Their expectations were high. Some students' self-reports of what they had learned, however, surpassed the teachers' estimates and they wondered about their validity. Some teachers also questioned whether the students fully appreciated or understood the rationale underlying the ES initiative's purposes and processes. On the other hand, the teachers noted that many of the students, as the year progressed, felt quite comfortable in taking a stand on an issue and vocally supporting their position. In concluding their commentary on students, the teachers felt that the students deserved a lot of credit in that "they fought for the program during the political crisis and generally took pride in it." They reported that the students stated that "they should get an award for being the first students to start out ES/CES."

Effects on Parents

Again, the teachers had no formal data to report; that aspect of the initiatives' evaluation is still in the planning phase. They did note, however, that they had the strong vocal support of a sizeable number of parents who spoke out in favor of the initiative at the January information forum and the February board meeting. Their perception, based on their contacts with parents during the year, was that the majority of the parents felt strongly that the initiative was quite beneficial to their children.

ESSENTIAL STUDIES CURRICULUM: DEVELOPMENT PROCESS AND CONTENT

Presented in this section are Lancaster's ES curriculum development framework, a commentary on the curriculum development framework, the proposed 1992-93 ES curriculum schedule, and the district science program coordinator's "curriculum-planning-down" framework. The latter framework was developed to assist district staff in extending the ES initiative to other subjects and grade levels not directly involved in ES. The framework also has potential application in responding to the state's new Chapter 5 outcomes-based curriculum regulations.

Curriculum Development Framework

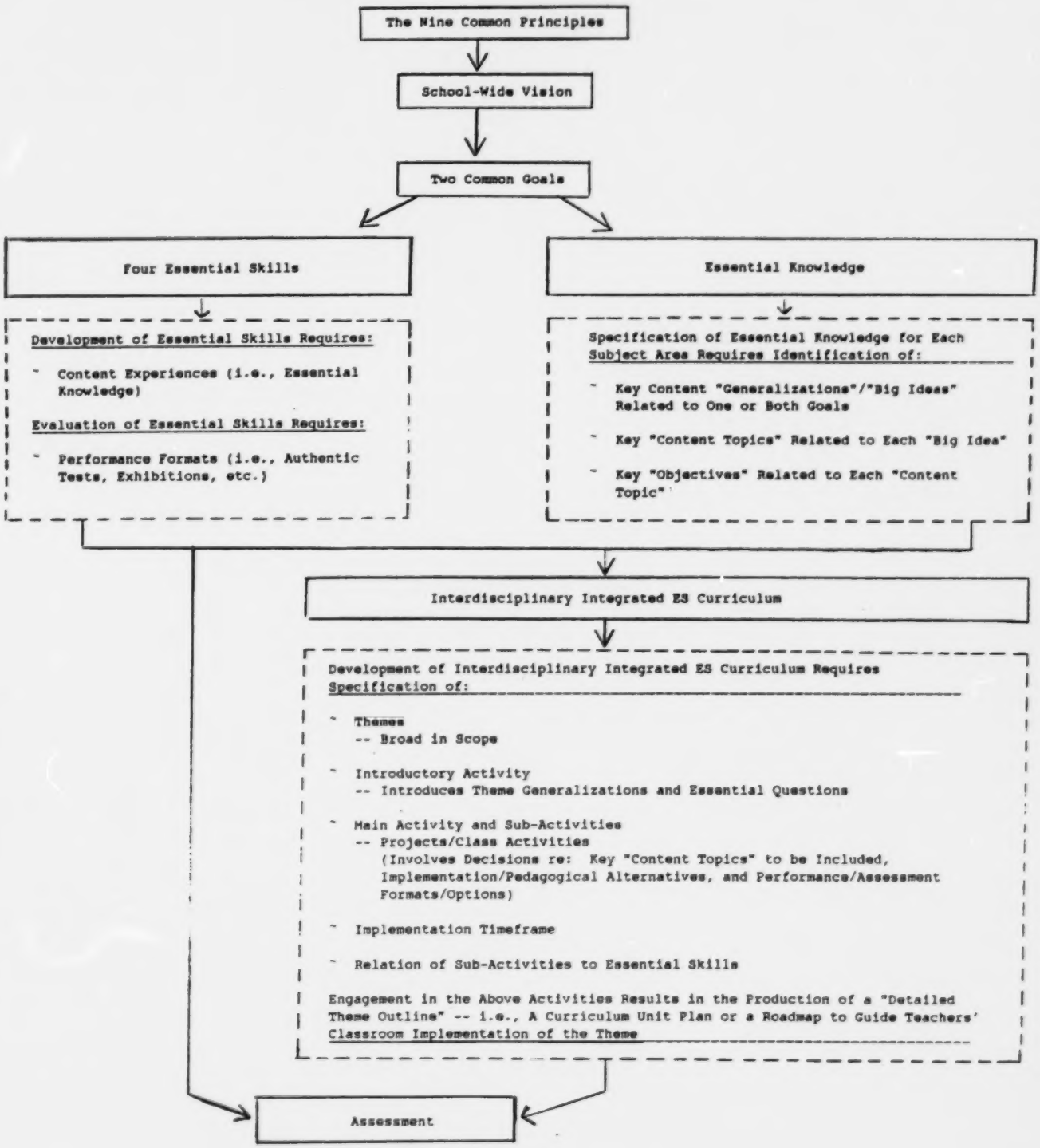
A schematic of Lancaster's curriculum development framework or process is presented below in Figure 1.

The framework, which was developed by the district science program coordinator, outlines the general sequence and focus of Lancaster's ES curriculum development activities. Placed at the top are CES' nine common principles and a related ES/CES-based school-wide vision statement. The principles and the vision statement, taken together, serve as the overriding contextual umbrella for ES curriculum/instruction development. The groundwork for the development of the ES curriculum began at the June 1990 TREK, with the identification of "two common goals" and "four essential skills" (see Appendix A). These statements describe the outcomes for the ES program and have served as the focal points for curriculum development. That is, all curriculum work was done with the idea of using "subject area content" to produce the outcomes described by the common goals and essential skills. The subject area content was collectively referred to as "essential knowledge." Additionally, Lancaster's ES curriculum work was predicated on a district commitment to: (1) integrate the teaching of the core subject areas, and (2) require students to demonstrate achievement through exhibitions, that is, to demonstrate skills and knowledge by using them.

Given the central importance of subject area content, the next step in developing the ES curriculum was the specification or identification, for each of the subject areas to be involved in the ES tenth grade pilot (math, communication arts, biology, and social studies), of the "essential knowledge" implicit in each subject area. Specification of this knowledge proceeded as follows. The relevant "generalities" or "big ideas" for a given subject were identified, and were related to one or both of the goals. Next, the key "content topics" related to each big idea were identified. Finally, key "objectives" related to each content topic were specified. Work on the above activity was conducted over two days at the beginning of the 1990-91 school year by the ES teachers with the assistance of the curriculum staff. A critical aspect of specifying each subject's "essential knowledge" was the reduction of the course content to the point where only that which was "truly" essential was specified (i.e., "less-is-more"). Accordingly, the ES teachers were told to "specify or identify only those things for which they would give their life to keep in the curriculum." For examples of the "big ideas, content topics, and objectives" that were identified, see Appendices C and D.

Figure 1

Lancaster's ES Curriculum Development Framework


The Nine Common Principles
School-Wide Vision
Two Common Goals
Four Essential Skills
Essential Knowledge
Development of Essential Skills Requires:
- Content Experiences (i.e., Essential Knowledge)
Evaluation of Essential Skills Requires:
- Performance Formats (i.e., Authentic Tests, Exhibitions, etc.)
Specification of Essential Knowledge for Each Subject Area Requires Identification of:
- Key Content "Generalizations"/"Big Ideas" Related to One or Both Goals
- Key "Content Topics" Related to Each "Big Idea"
- Key "Objectives" Related to Each "Content Topic"
Interdisciplinary Integrated ES Curriculum
Development of Interdisciplinary Integrated ES Curriculum Requires Specification of:
- Themes
-- Broad in Scope
- Introductory Activity
-- Introduces Theme Generalizations and Essential Questions
- Main Activity and Sub-Activities
-- Projects/Class Activities
(Involves Decisions re: Key "Content Topics" to be Included, Implementation/Pedagogical Alternatives, and Performance/Assessment Formats/Options)
- Implementation Timeframe
- Relation of Sub-Activities to Essential Skills
Engagement in the Above Activities Results in the Production of a "Detailed Theme Outline" -- i.e., A Curriculum Unit Plan or a Roadmap to Guide Teachers' Classroom Implementation of the Theme
Assessment

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The specification of the "essential knowledge" for the ES curriculum served several purposes. It resulted in revised course outlines organized around "big ideas" related to the two goals. It afforded teachers the opportunity to look across subject areas and see potential interrelationships among subjects and identify areas of common ground. Lastly, it constituted, collectively, the "subject area resource" to be used in the next step of curriculum development.

According to the science program coordinator, however, before the interdisciplinary ES curriculum could be developed a vehicle had to be identified "which would allow for the linkage of the subject areas to the common goals and essential skills." It was decided that "themes" could serve as the vehicle needed to facilitate the integration of content from different subject areas. The subsequent use of themes, therefore, served to organize and focus the development of the curriculum, coordinate the activities of teachers and students, and guide the work on different subject area content toward a common outcome. Of necessity, themes had to be broad in scope, allow for the inclusion of content from all subjects, and allow for the inclusion of students of all levels of ability. The four themes used in 1991-92 fit the above criteria. The themes were: Human Curiosity and the Search for Answers, Conflict and Conflict Resolution, Technology and Life Choices, and Futures for Life and Matter. Additional themes planned for 1992-93 include: Structures, and Interaction.

Work on developing the above themes was guided by the planning structure outlined in Figure 1 under the heading "Interdisciplinary Integrated ES Curriculum." That structure included: specification of the theme title; development of an introductory activity to introduce the theme generalizations and essential questions; development of a main activity and related sub-activities -- which involved the specification/selection of the key "content topics" to be involved, and the specification of classroom implementation alternatives/formats and assessment alternatives/formats; specification of the implementation timeframe; and identification of the relationship of the sub-activities to the "four essential skills." The theme planning structure resulted in the production of a "detailed theme outline" which, in essence, constituted a curriculum unit plan, or a roadmap, to guide teachers' classroom implementation of the theme (see Appendix E for an example of a detailed theme outline).

In elaborating on the theme planning structure, the science program coordinator noted the following: "The structure incorporated two kinds of activities: an 'introductory activity' for each theme, and one or more activities which provided experiences leading to the study of the subject areas. The 'introductory activity' was large-group in format and served to introduce a number of broad 'theme generalities' and related 'essential questions' for students to deal with during the study of the theme. 'Large-group' meant that all students were involved in the same introductory activity, although smaller groups or individual students might do parts of the work. The introductory activity had the function of raising questions, referred to as essential questions. Answering the essential questions was a key part of the work on the theme. For example, in the case of the theme Human Curiosity and the Search for Answers, the introductory activity involved the study of six narratives which showed human curiosity in a variety of historical contexts and linked curiosity to questions. The study of these six stories had the role of generating awareness of the pervasive existence of curiosity in humans, and the variety of conditions and results that humans are part of as a result of human curiosity.

The essential questions for the theme (see Appendix E) were then raised by the students with the help of the teachers following the introductory activity."

"Additionally," the science program coordinator continued, "the theme planning structure allowed for two formats for studying themes. One format for studying a theme included a long-term project (i.e., Project-Driven Theme Study Format) in which all students and teachers were involved. The activity produced a product which represented the combined input of all students and teachers. In this sense, the project was an exhibition of achievement for the combined team of students and teachers. The project represented the use of thinking and processing skills as they were applied to the content learned from studying the subject matter. An alternative format for studying themes, after the introductory activity, was to deal with the essential questions mainly in separate subjects (i.e., Subject-Driven Theme Study Format), rather than through specially designed activities that involved the integration of subjects. In this format, integration occurred by way of shared experiences, following specific studies in separate subject areas (see Appendix F for a schematic of Lancaster's two design formats for Theme Study-Based Curriculum)."

As one might expect, Lancaster's curriculum development framework is not cast in iron. Rather, it is evolving and being fine-tuned as both the curriculum staff and the ES teaching staff become more experienced in its application. Similarly, the "first-draft" themes, which were developed in 1990-91 by the curriculum and ES teaching staff for use in 1991-92, are in the process of being revised or fine-tuned based on feedback gleaned from the ES teachers' pilot classroom experiences.

Commentary on Curriculum Development Framework

In commenting on the ES curriculum development framework or process the district science program coordinator reiterated the following: "The two common goals describe the mission of the school, and the essential skills describe the means to achieve the common goals. Both of the latter are stated in broad terms. The development and assessment of the 'essential skills' requires content experiences (i.e., essential knowledge) and performance formats, respectively. These are operationally defined by reducing the curriculum down to the 'key goal-related content generalities/big ideas,' and their subsumed 'content topics and objectives.' Proceeding through the above steps, for each major subject, condenses the courses of study and allows teachers to become aware of the commonalities among courses and the potential for integrating subjects."

The science program coordinator continued: "Utilizing themes as organizers allows for the merger of key content generalities/big ideas, content topics, and objectives. The objectives reflect the outcomes for which legitimate graduation credits will be given. This approach makes each course a resource for doing something, rather than an end in itself. The nine CES principles tie in in that they define the desired school and pedagogical context. Assessment of specific theme and/or course outcomes occurs on a case by case basis. Assessment of students' acquisition of the essential skills is contingent on students' cumulative theme and course experiences. The specific performances/exhibitions to be used to assess said acquisition of the essential skills/knowledge remains to be determined; it may involve portfolios of students' work/exhibitions/projects and/or one or more culminating exhibitions."

Regarding his work and role with the ES teaching staff, the science program coordinator related that: "Our major role as curriculum office staff was to (1) help generate ideas for themes, (2) create a lot of examples related to those themes, (3) work with the ES teachers in an over-the-shoulder coaching/assisting role during our ES curriculum development/theme activities development days, and (4) take the products from the latter days (i.e., the detailed theme outlines) and streamline them for the teachers' use. The driving force underlying the above work was the integration of the subjects, and the development of strategies/ activities to address the four essential skills in the context of teaching the theme content."

Proposed 1992-93 ES Curriculum Schedule

As described by the science program coordinator, the proposed 1992-93 ES curriculum schedule will involve the following.

The theme Human Curiosity and the Search for Answers will be an ongoing part of all work during the year. That is, the Essential Questions related to the theme will be answered as other themes and work not related to themes are done.

Part 1: STRUCTURES -- 7 weeks

The study of this theme will be done using the Project-Driven format, with all subjects used to provide input to the project.

Part 2: Independent Study of Subjects -- 2 weeks

Part 3: Theme Study by Paired Subjects -- 3 weeks

Themes chosen by teams will be studied in paired-subject teams; social studies with communication arts, and science with math.

Part 4: Independent Study of Subjects -- 2 weeks

Part 5: INTERACTION -- 5 weeks

The study of this theme will be done using the Subject-Driven format, with all subjects focusing on the same set of Essential Questions.

Part 6: Independent Study of Subject -- 3 weeks

Part 7: Theme Study by Paired Subjects -- 4 weeks

Themes chosen by teams will be studied in paired-subject teams; social studies with communication arts, and science with math.

Part 8: Independent Study of Subjects -- 3 weeks

Part 9: FUTURES-TECHNOLOGY -- 7 weeks

The study of this theme will be done using the Project-Driven format.

The schedule proposed above can be summarized as follows: for about one-third of the year students will be working on comprehensive themes integrating the four subjects; for another third they will be working on integrated pairs of subjects; and the balance of the time will be spent working on subjects in their more traditional format.

Applications to Chapter 5

Generalizing from the framework that had been developed to guide the district's CES/ES curriculum development/revision activities (see Figure 1), the science program coordinator devised and piloted in the spring of 1992 a "planning down framework" that is applicable to the development of curriculum in response to the state's revised "Chapter 5 goals of quality education and their related learning outcomes." The "planning down framework" consisted of the following:

1. Identification of "exit outcomes"
2. Identification of relevant "quality goals"
3. Identification of relevant "course topics or units"
4. Identification of relevant "topic or unit objectives"
5. Identification of relevant "enablers."

Appendices G and H, respectively, present a schematic of the planning down framework and a brief example for reference/clarification purposes.

According to the science program coordinator: The "exit outcomes" are roughly akin to "graduation outcomes," and the "quality goals" are similar to "course generalizations/big ideas." Once these are stated, organized, and possibly reworded, teachers need to identify what "really matters" regarding their course topics, unit/topic objectives, and assumed enabling behaviors (i.e., focusing on only those things for which they would "give their life" to keep in the curriculum) with regard to a particular exit outcome and quality goal.

In the proposed "planning down framework," assessment changes in specificity as you go from the top (i.e., more difficult and complex to assess) to the bottom (i.e., narrower, more specific, and easier to assess). That is, the "topic objectives" and "objective enablers" can pretty well be assessed via conventional assessment. However, assessing the quality goal, acquisition of which is operationally defined by a student's exposure to and mastery of a number of "course topics or units and their subsumed unit objectives/enablers" is more difficult. Similarly, as in the example presented in Appendices G and H, a student's application of what is meant by biotic-abiotic interactions is also more difficult to assess. That is, the sum of a student's exposure to instruction related to "topic objectives 5A-5E" may not necessarily lead to the student's mastery of the topic biotic-abiotic interactions, nor to his/her ability to apply the concept in a problem situation. Selected problem solving experiences may need to be built into the curriculum to facilitate students' acquisition/application of the higher order thinking skills implicit in the exit outcomes and quality goals.

In any event, the science program coordinator indicated that the above framework represented Lancaster's "first cut" at developing a process that is applicable to the state's new Chapter 5 curriculum requirements. He referred to it as "planning down from Chapter 5 to CES/ES." Overall, the model or framework involves "planning down," and then "working up" by devising appropriate enabling activities, fine tuning topic objectives/course topics, devising appropriate assessments, and so forth. The process assumes that one or more "pilot and revise" cycles will be in involved.

McCASKEY'S HIGHER EDUCATION LIAISON

Described below are the origin and goals of McCaskey's higher education liaison. Also described are the liaison's activities, major accomplishments, and plans. The section concludes with the liaison's reflections on the ES initiative.

Origin and Goals of McCaskey's Higher Education Liaison

From its inception, the Re:Learning initiative in Pennsylvania has been viewed as a collaborative effort between basic education and higher education. In essence, as schools and the roles of teachers change, so, too, must the programs which prepare future educators. With this end in mind, the Pennsylvania Academy for the Profession of Teaching (PAPT) provided small grants to staff from colleges and universities involved in teacher preparation to stimulate their interest in Re:Learning, and to encourage them to examine its implications for teacher preparation. Specifically, in 1989, the Re:Learning state coordinator encouraged Re:Learning districts to invite proximate higher education colleagues to join in their discussions of Re:Learning. Following up on this action, the executive director of PAPT made arrangements with six colleges and universities across the state to "partner-up" with districts involved in Re:Learning. Dr. Dennis Denenberg of Millersville University was asked to coordinate this higher education/Re:Learning initiative.

In September 1990, Dr. Denenberg invited Dr. Cheryl Desmond, Assistant Professor of Education, Millersville University to be Millersville's liaison for McCaskey High School. Dr. Desmond accepted the liaison role with enthusiasm. She was well suited to the role in that she had former experience in urban education, teacher centers, and outcomes-based education. She has children in the district, has been active in the parent-teacher organization, has run for the school board, is active in community affairs, and is a member of the district's long range planning committee. She had also read Horace's Compromise and was intrigued with Theodore Sizer's ideas.

Dr. Desmond noted that her main goals as a liaison (partner) were to learn from McCaskey's ES efforts and apply that learning to restructuring teacher education at Millersville. She added that, of necessity, that involved forming a strong, collaborative relationship with McCaskey's ES staff based upon mutual respect and reciprocal support activities. "We wanted to support McCaskey's ES-related activities, and at the same time use the experience to benefit Millersville's students and teacher preparation program."

Higher Education Liaison's Activities

To realize the above goals, Millersville's higher education liaison engaged in the following activities.

- The liaison's interaction with McCaskey's eight ES teachers, the teacher facilitators, and the central office curriculum staff began in January of 1991. Specifically, the liaison sat in on the ES curriculum development sessions (January-March 1991) to learn about the ES initiative, and become acquainted with the ES staff.

- Concurrent with the above activity, staff from Millersville's education department, the university administration, and the school district administration arranged to have Millersville's sophomore education students serve as tutors for some of Lancaster's "partnership" students. Many of the "partnership" students, identified for possible college, were having problems in math and English, and the district was having a hard time providing them extra assistance.

  Accordingly, the above staff (including the liaison) agreed to place sophomore secondary education students in Lancaster's three junior highs and McCaskey for a week to observe in an "urban education" situation. Following the week of observation, they commenced tutoring between two or three students each during the school day, for two or three hours a week, for a total of 24 hours over a twelve week semester period. Overall, about 120 "foundations course" sophomores were involved in the tutoring; forty of these were placed in McCaskey. The tutoring was open to any student who wanted the service. The "partnership" organizers also provided selected before and after-school tutoring.

  In commenting on the tutoring effort, the liaison said: "We wanted to support McCaskey's ES initiative, and at the same time expose our students to a reform environment to increase their awareness of the demands of teaching in a reform situation."

- Knowing that she would be teaching a Junior Methods Class in 1991-92, the liaison struggled with the dilemma of "how to bring the school reform experience to the the university," given that she could not place all of her students into McCaskey. In April of 1991, therefore, she initiated discussions with district ES and university authorities to set up live video transmissions of the ES classes to her Junior Methods Class at Millersville, and received their authorization in June 1991. This activity was funded by PAPT ($5,500) and Millersville ($5,000) and resulted in the placement of live video transmission equipment in four of McCaskey's ES classes. The equipment, which went on line in early March 1992, was also utilized by McCaskey's ES teachers and students to tape students' performance exhibitions.

- In the summer of 1991, to broaden her understanding of CES and strengthen collegial relationships with McCaskey's ES staff, the liaison participated in a week-long CES Teacher Learning Institute at Brown University with two of the ES teaching staff. The liaison and ES staff co-taught demonstration CES lessons based on "essential questions" and participated in debriefing seminars together.

- In the fall of 1991, Millersville staff responsible for placing student teachers arranged to place four student teachers with the ES teaching teams at McCaskey. The liaison supervised the student teachers' twelve week teaching experience. This included observing their classes two to three times a week, sitting in on planning sessions with the ES staff, and conducting seminars for the ES student teachers (four students at McCaskey and four at another proximate Re:Learning site -- Garden Spot High School).

- The liaison served as one of the presenters at McCaskey's January Forum on ES.

- In the second semester of the 1991-92 school year, nine of the liaison's Junior Methods Course students were placed in one of the ES teacher's classrooms. The juniors, who had to put in 30 hours over eight weeks, assisted the teacher with small group instruction, helping students conduct research and prepare documentaries for a war memorial project. Basically, they served as resources for the students.

- At Millersville, the three Junior Methods Courses which the liaison taught during the second semester of 1991-92 were organized around CES' nine essential principles, and incorporated live transmissions from the ES teachers' classes to the methods classes. Short, selected 10-15 minute classroom clips were shown once a week over a month period and the liaison's students were engaged in discussion of the ES classes' content and process. Several of the ES teachers from McCaskey were also invited in to present to the methods classes.

- The liaison participated in two state-sponsored weekend "teacher conversation" meetings with selected McCaskey ES teaching staff, and also participated in two day-long meetings of the "higher education partners," called by Dr. Denenberg.

- Additionally, the liaison participated in a debriefing of the second semester student teachers (eight were place in McCaskey's ES classes by Dr. Denenberg) to obtain their input on "what teacher preparation should be."

- Lastly, the liaison collaborated with the Educational Foundations department members at Millersville on the drafting of a preliminary working proposal to restructure Millersville's secondary education teacher preparation program and integrate the curriculum (see Appendix I).

Major Accomplishments

Cited by the liaison as major accomplishments over the past two years were the following:

- the successful development of a reciprocal, collaborative, integrated link with an urban high school -- "Its working both ways," she stated, "We are receiving input and are also providing assistance; we're working together."

- the university's provision of tutorial services for the partnership (and other) students in the school district

- the establishment of a live-video-transmission (tele-communications) capacity between McCaskey and Millersville

- the drafting of a preliminary working proposal to restructure Millersville's secondary education teacher preparation program, and to integrate the curriculum.

Plans

The higher education liaison plans, specifically, to:

- continue with the collaborative restructuring of the secondary education teacher preparation program at Millersville
- assist with setting up ES parent advisory groups and an ES community service component
- use the tele-communications hookup with McCaskey in two ways: (1) as a source of preliminary information or orientation to McCaskey for sophomores before they go out for their school observation, and (2) with junior methods students to examine McCaskey's classes from the perspectives of urban educational reform, pedagogy, cooperative learning, authentic assessment, etc.
- continue to engage sophomore "social foundations" students as tutors at McCaskey (40 students will be used during the 1992-93 school year)
- continue to meet with and conduct seminars for the student teachers placed in ES classes at McCaskey (and Garden Spot High School).

Reflections

On reflecting on her ES-related experience with McCaskey, the liaison noted that the school district could not have been more supportive. "They met us with an open door," she stated. Similarly, she cited the proactive support of Dr. Denenberg and Susan Arisman, the executive director of PAPT. Regarding the draft proposal to restructure the secondary education teacher preparation program at Millersville, she stated: "As one might expect, there are still a lot of territorial issues to be worked out within our own department and with the liberal arts staff. Nevertheless, we feel we are off to a strong start with regard to modifying our program."

On reflecting on some matters that might have been approached differently, given the benefit of hindsight, she offered the following comments:

- "We [at McCaskey] got so caught up in developing the ES initiative that we forgot about communications and selling our program (i.e., the political crisis). There wasn't a strong enough public relations effort. However, it wasn't intentional, it was just an oversight."
- "When teachers commence with designing and implementing innovative ideas and try to institute a new initiative, they need resources, political protection, and a communicator trained in communications to promote and explain their efforts. Effective communications are essential."
- "There needs to be some way to let teachers new to the initiative chew the new ideas over (i.e., those teachers who are in the middle group -- cautious followers). They need to be able to chew over the reform effort enough so that it makes sense to them. It can't be imposed."

- "There is a need to provide support to the ES teachers in dealing with visitors. In the past year the teachers handled this on their own and it interfered with their work and planning time (e.g., teachers gave up planning periods to talk to visitors). Perhaps, there should be a scheduled visitation day or days."

She concluded: "I believe that higher education [teacher preparation] can and should work with public education. Some [at Millersville] feel that our work with McCaskey is just another thing that will pass. For the sake of our students I hope that they are wrong. Many of our students are open to new ideas. We need to be careful, however, not to oversell reform efforts. They need to be real. Students need to experience them, warts and all. Change efforts, both at the higher education and public education levels, need to be seen as an integral part of the overall educational process."

ANALYSIS, ISSUES, AND COMMENTARY

This section presents an analysis of the progress of McCaskey's ES initiative viewed from the perspective of the "Causal Lens," an analytic tool borrowed from CES' TREK materials. A description of the Causal Lens precedes the analysis. Additionally, issues derived from the analysis are offered for the district's consideration or reflection. The section concludes with a brief commentary on McCaskey's progress.

The Causal Lens

The "Causal Lens" is a research-based framework or tool that describes a number of "key conditions, events, and processes" that have been found to be associated with successful school reform efforts. The framework can be used as a guide to planning (as it is in CES' TREK) or as a formative assessment tool to analyze, post hoc, the factors which contributed to a reform initiative's progress. A listing of the key conditions, events, and processes is provided as follows.

- Key Conditions: Active, positive principal leadership; shared power; collegiality/staff cohesiveness; school autonomy; shared vision; reform program cohesion around educational goals.

- Key Events: Develop a shared vision; build collegiality; design a coherent reform program; develop school autonomy/external supports; diagnosis/discovery; develop strategy; implement early and expand quickly.

- Key Processes: Use/build teams; rapidly expand involvement; define clear tasks; define clear new decision-making, communication, and role assignment procedures; emphasize collaboration, vision, action, and reflection.

Analysis and Issues

The framework is used below to structure an analysis of McCaskey's progress and to surface issues for reflection. Given that there is some repetition of the "topics" cited under the "key conditions, events, and processes," and given that it is difficult to separate the conditions-events-processes post hoc, the three aspects of the framework will be dealt with simultaneously for each separate topic. It also bears noting that the topics are inter-related; it is hard to address one without referring to others. With that brief preface, the analysis follows.

Active, Positive Principal Leadership

The information documented in this report provides very strong evidence that this condition was met. The principal was the key visionary and motivator behind McCaskey's ES initiative, and continues to play a very active role in setting its direction. Additionally, in working with the teacher facilitators, the principal has engaged in a form of participatory management for several years. From the perspective of hindsight, however, it appears that the

principal may have spread himself too thinly regarding the various needs that had to be addressed (particularly communications), and may not have provided for a sufficiently broad base of representative stakeholder involvement in the initial design and implementation phases of the initiative. The "involvement issue," though, was a "judgement call." If too many staff had initially become involved in the conceptualization of the ES initiative, vis-a-vis a broad-based democratic committee process, it may never have "gotten off the ground." In any event, the principal may want to consider ways to distribute the leadership responsibilities for ES in order to make his role more manageable.

Shared Power

This condition needs to be looked at from two perspectives. From the ES teachers' perspective there was a shift in power. The ES teachers felt that they had control over the curriculum, pedagogy, student scheduling, and assessment. In fact, they felt that they were perhaps "empowered too much," and left on their own to too great a degree. They indicated a desire to have regular weekly contact with an administrator charged with overseeing ES' classroom implementation and coordination.

From the perspective of the representative involvement of the teaching staff at large, the principal did involve the teacher facilitators in ES' conceptualization. He noted, however, that they have become institutionalized in their role, and are seen by many of the faculty as being closer to management than to the faculty. Thus, they are not seen by the faculty as their representatives in a participatory principal-teacher management structure and the majority of the teaching staff do not perceive that they are represented in the power structure of ES.

Given the realities of the above perceptions, McCaskey's leadership staff may want to consider whether the time is right for a representative group of stakeholders (teachers, parents, students, and community members) to examine the issue of shared power to determine whose needs/wants should be involved/represented in the ES decision-making process, and to clarify who needs to be represented in what kinds of decisions and in what manner (e.g., through the creation of a district steering committee and selected sub-committees).

Collegiality/Staff Cohesiveness

This condition also needs to be viewed from two perspectives. From the perspective of those who participated in the initiative (i.e., ES teachers, teacher facilitators, principal, central office curriculum staff, higher education liaison), there was a strong sense of collegiality and cohesiveness. In large part, the staff who self-selected themselves, to be involved, shared or bought into a common vision of the needed changes and particiated in a number of common experiences. The latter was particularly true of the ES teachers who also had the opportunity to participate in a one-week off-site retreat prior to commencing the 1991-92 school year, an event which contributed substantially to their cohesiveness/collegiality as a group.

From the perspective of the non-participants, however, the initiative led to strong divisions among the faculty and divisions within the community. The divisions among the faculty were caused, in part, by the unexpected difference in ES and non-ES teachers' class sizes and the initial "critical press" which

the initiative evoked. The divisions within the community were attributed in part to a failure to communicate effectively both the intent and the operational design of the initiative in the early phases of its development/implementation. Overall, it would appear that there continues to be a need to close the rift among the high school faculty, and a need to work at increasing the faculty's (and the community's) understanding and acceptance of the ES initiative. The district may want to consider the means required to address and resolve these issues.

School Autonomy/External Supports

The autonomy condition was met when McCaskey was afforded the latitude to make major changes in the curriculum, pedagogy, student grouping/scheduling, assessment, and staff assignments with the sanction and support of the superintendent, the central office staff, and the school board. Some concessions or compromises were made to assuage the concerns of parents when the board approved the mandated implementation of ES for the entire tenth-grade in 1992-93; namely, that selected advanced subjects/courses would be taught apart from ES in a more traditional format. Although some contend that this compromise constituted a departure from CES' philosophy, the efficacy of this compromise remains to be determined because certain subjects do require very specific entering behaviors or skills. In any event, McCaskey's ES leadership group has plans to extend the application of several of CES' principles (i.e., student-as-worker and teacher-as-coach, less-is-more, exhibitions, personalization) to classes/courses in the eleventh and twelfth grades that currently are not a formal part of the ES initiative.

With regard to developing external supports, McCaskey was quite active in availing itself of the staff development/networking resources offered by CES/ECS and the Pennsylvania Re:Learning state coordinator (i.e., staff participation in TREKS, summer teacher seminars at Brown University, and state-sponsored teacher conversations/workshops), and engaged in a productive collaborative relationship with the higher education liaison. McCaskey also drew upon external trainers (e.g., Socratic questioning, performance assessment) to increase its staffs' capacity to implement ES. Another such activity was McCaskey's outreach to selected local and national colleges and universities to arrange for their support in admitting McCaskey's ES students to their institutions. This activity was particularly critical given parents' concerns about the effects of participating in ES on college admissions.

Shared Vision

Among those who participated in the initiative, there was a very strong "shared vision" of the goals, procedures, and expected outcomes of ES. However, among the remainder of the faculty, there was only a token commitment to the initiative and to the school vision statement that was developed with the faculty after the major work on the initiative's initial conceptualization had been completed. Reportedly, the ES initiative and the vision statement were seen by the faculty as being "OK" as long as they were not impacted directly by them. ES leadership staff at McCaskey acknowledged that more work needed to be done to cultivate faculty understanding of, interest in, and commitment to a shared vision of ES. Thus, this condition was only partially met.

Reform Program Cohesion about Educational Goals

A very strong aspect of McCaskey's ES initiative was its coordinated and programmatic approach to ES. This approach was distinguished by the school's/district's: specification of two common goals for all students and four related essential skills; development of a curriculum framework designed to drive and coordinate curriculum development to the end of promoting students' acquisition of the essential skills and achievement of the common goals; commitment to operationalize CES principles in the classroom/school (e.g., changes in pedagogy), merge the teaching of various subjects (i.e., interdisciplinary curriculum), delimit the subject matter so as to focus on essential knowledge (i.e., less-is-more), and assess students' achievement via performance assessment approaches; and provision of the time, resources, staff development, and central office curriculum staff support required to achieve the above through a planned and coordinated incremental "pilot and revise" approach to implementing ES. Overall, McCaskey's approach to ES was comprehensive, coordinated, coherent, and directed toward achieving specific reform program goals. In particular, McCaskey's systematic focus on "modifying the curriculum as the way to bring about change" was, perhaps, the most crucial aspect of the ES initiative.

Use/Build Teams

McCaskey's ES design and implementation activities were predicated heavily on the use of teaching teams. The two teams of four teachers each that were engaged in ES in 1991-92 were involved in developing/revising the ES curriculum, and were afforded a large measure of autonomy in the day-to-day decisions involved in implementing ES. They were also granted the autonomy to work together as a combined team of eight when they decided that this would best suit their needs. Their cohesion as a team evolved. Team members indicated that the one week off-campus ES planning retreat in the summer of 1991 contributed strongly to their getting to know one another well and their subsequent "jelling" as a team. They indicated that the two new teams proposed for the 1992-93 expansion of ES would likely benefit from a similar "retreat"/team-building experience.

Generally speaking, the shared experiences in which the 1991-92 ES teachers participated as a group (curriculum development, staff development, summer retreat, classroom implementation of ES, the political controversy) contributed to a strong personal sense of collegiality, mutual respect/commitment, and camaraderie among team members. Team members reported that they worked well together and generally made decisions on the basis of group consensus. Some team members reported, however, and others concurred, that they hesitated to surface concerns or issues at times because they did not want to be seen by the team as "being negative." Thus, an area about which team members felt less comfortable, or certain, was their formal operation as a team. Although they evolved their own team leadership structure, roles, and norms, they felt they could have utilized more guidance or assistance in this area. That is to say, more attention seems to be needed with respect to the more formal aspects of team building (i.e., team leadership structures, agenda setting and decision-making procedures, team roles, group meeting behaviors, task maintenance versus group maintenance, and team debriefing procedures). The district, therefore, might want to consider engaging the new teams in working retreats and providing them with more formal training/experiences in team building.

Define Clear Tasks and New Decision-Making, Communication and Role Assignment Procedures.

The programmatic manner in which McCaskey approached the design and implementation of its ES initiative included the specification of clear tasks (i.e., the development of interdisciplinary curriculum, a shift in pedagogy, changes in assessment) and new decision-making procedures (e.g., increased teacher control over the curriculum and students' daily schedule). New communication procedures or channels (e.g., more direct contact/communications between the ES teachers and the principal, central office curriculum staff, and relevant support staff) were also provided in McCaskey's ES structure. Similarly, provisions were made to accommodate needed changes in role assignments (e.g., provision for the roles of ES teachers, assessment support team staff, and the higher education liaison). As was noted in the body of the report, the ES-related "task, decision-making, communication and role assignment" structure at McCaskey is evolving. Although the current structure has served McCaskey's needs to date as evidenced by its ES progress, it has also had some shortcomings with respect to communications, the adequacy of the planning/preparation time provided teachers to integrate the teaching of four subjects, and procedures for dealing with visitors. The district might want to consider ways of monitoring the structure systematically and modifying it as needed to increase both the effectiveness and the efficiency of McCaskey's ES activities.

Diagnosis/Discovery and Strategy Development

These Causal Lens topics relate to all aspects of the ES initiative, from the classroom implementation of a specific theme to the operational/management structure of the entire initiative. Some of the informal diagnoses implicit in or revealed in the body of the report, for example, indicate that strategies need to be developed to effect improvements in the following areas: communications with the faculty at large, parents, and the community; the internal operation of the teaching teams from a group-process perspective; communications/coordination among teams, and regular communication between the teams and the administration; refinements in the process of interdisciplinary theme-based curriculum development to eliminate the slippage between the steps involved in developing a theme outline, interpreting it prior to implementation, and implementing it; the schools'/teams' procedures for dealing with visitors; the time that ES teachers have to engage in backward planning, develop performance assessments, and reflect on their activities; and the increased planning time required by ES teachers to integrate the teaching of four subjects if a baseline level of acceptable instructional rigor is to be met. Overall, the ES teachers reported that they were "overwhelmed with trying to do it all" in the first year. The above issues are known to McCaskey ES staff (central office, school administrative and teaching staff), and they may want to consider various means to effect their resolution.

Implement Early and Expand Quickly

The principal acknowledged that he moved quickly to implement and expand the level of implementation of the ES initiative. The fact that the board supported the mandatory expansion of the initiative to the entire tenth-grade for the 1992-93 school year attests to the decisiveness of McCaskey's ES implementation/ expansion activities. In fact, the mandatory expansion of the

initiative was viewed by the school's/district's ES proponents as a step that was necessary if the initiative was to survive. That is, the ES proponents felt that the initiative's impact or status as a legitimate reform effort would be severely compromised if student participation/involvement was relegated to a "volunteers-only" basis. McCaskey, therefore, did implement early and expand quickly.

Additionally, some thought has been devoted to incorporating the major elements of the initiative (e.g., student families/teaching teams, theme-based curricula, changes in pedagogy, student scheduling and assessment) from the seventh through the tenth-grades in the district. The eleventh and twelfth-grades' curricula and structure would be reserved or allocated for students' more specialized career-related coursework, and would accommodate CES' principles to the extent possible.

Emphasize Collaboration, Vision, Action, and Reflection

Again, the information documented in this report provides strong evidence that McCaskey's ES initiative emphasized collaboration, vision, and action. The reflection component seems to be ongoing and/or embedded in the participants' activities/interactions. Time for reflection, however, is critical and the district may want to consider allocating more time to this activity (e.g., the ES teaching teams expressed a need for additional, regularly scheduled reflection time to assess their activities, regroup, etc.).

Commentary

McCaskey's accomplishments in implementing its ES reform initiative are genuinely impressive, and it bears restating that McCaskey was selected for this documentation activity due to the scope and quality of its ES activities. As such, the issues surfaced for consideration/reflection in the analysis are not intended as criticisms. They do confirm, however, that major school reform, even when well conceived and designed, is complex and problematic. Reform is a calculated journey accompanied by substantial uncertainties; there is no easy way to effect major educational reform. Bearing that in mind, it needs to be recognized that there are no "easy answers" to the issues surfaced in the analysis.

The complexities of implementing major educational reform are well described in a recent article by Fullan and Miles (1992), two recognized authorities on educational reform.* Fullan and Miles summarize the lessons learned from current knowledge of successful change initiatives, and cast them in the form of seven propositions for successful systemic change. They argue that, "No change would be more fundamental (beneficial to education reform) than a dramatic expansion of the capacity of individuals and organizations to understand and deal with change." To that end, staff at McCaskey (and other Re:Learning sites) are referred to this provocative current treatise on educational change/reform in the hope that it will help to put their current endeavors in perspective and facilitate their future endeavors.

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*Fullan, M. G., & Miles, M. D. (1992, June). Getting reform right: What works and what doesn't. Phi Delta Kappan, 73(10), pp. 745-752.

APPENDICES

APPENDIX A

Lancaster's Two Common Goals and Four Essential Skills

COMMON GOALS

1. To provide students with the capacity to use background skills and knowledge to cope with existing and developing conditions and changes in life.

2. To provide students with a capacity for "personal expansion," a composite of: a sense of belonging in the universe; a capacity to enjoy and benefit personally from using knowledge and processes; and a sense of hope and optimism about life.

ESSENTIAL SKILLS

1. To use thinking skills and processes in problem solving and learning.

2. To manage and process information in language and numerical formats.

3. To integrate information and skills from multiple content areas.

4. To use interpersonal skills in collaborating and interacting with other people.

APPENDIX B

Essential Studies Proposal for 1992-93

All subjects elected by incoming tenth-grade students at McCaskey will be managed within the framework of the Essential Studies Program.

Within the Essential Studies framework, the following conditions will prevail:

1. Specific courses elected by students will be used for planning purposes to assure differentiation of instruction.

   Organizationally, students and teachers will work as three large families, each composed of eight teachers and approximately one-third of the students in tenth grade. Two teachers will be from each of the four subject areas: math, science, social studies and communication arts. Each family, in turn, will be divided into two teams of students who will work with four teachers representing the four subject areas.

   Staff specialization and special scheduling of advanced-level science and math courses will dictate membership in some of the teams. One of the teams will include all of the students who are taking Chemistry and/or Pre-Calculus. Another of the teams will include all students who have special learning needs.

2. To emphasize interrelationships among subject knowledge and processes, students and teachers will function in a team format and will work within a block of time equivalent to five periods of time in the daily schedule at McCaskey. Scheduling of students within this block of time will be at the discretion of teachers in the program.

3. Within the five-period block of time, students will have instruction in science, math, social studies and communication arts, using four of the periods. The remaining period will be used for options, including student elections of other subjects, work on assessment performances, remediation or enrichment and interpersonal advisory activities.

   To prepare students for more detailed studies of subjects in higher grades, the instructional program will concentrate on the development of broadly useful learning and thinking skills and essential subject knowledge, both objectives being consistent with the directions shown in forthcoming changes in Pennsylvania's curriculum regulations.

4. A curriculum framework built around broad themes will be used to focus development of essential skills and essential knowledge. Two variations will be used to study within the themes. One will provide for a large-scale project to serve as a model of assessment along the lines of proposals in Pennsylvania's curriculum plans and the district's strategic plan. The second variation will deal with the themes from the standpoint of more narrow studies within individual subject areas. At least one theme will be studied using the large project component. The final decisions about the number of themes to study during the school year and how the themes will be studied will be made by teams of teachers.

5. Science and mathematics courses which are normally taken by students at the eleventh-grade level will be scheduled in the standard daily schedule and taught in conventional period structures. Specifically, these courses are first-level Chemistry courses and Pre-calculus.

6. The number of electives students could opt to take during the school year would be as high as three, which is the maximum number of electives students have ever had at McCaskey as incoming tenth graders. For as much as three of seven periods in a day, students could be functioning within the total school climate.

7. Instructional strategies and methods used by teachers would not be restricted. Selection of strategies and methods would be dictated by the subjects being studied, not by any particular initiative in the district or at McCaskey.

8. Assessment of students would take various forms, including conventional quizzes and tests, performances of various kinds and large-scale exhibitions, as required by both the revised curriculum regulations and the district's strategic plan.

9. Support for teachers in the program would be provided through specific roles for the McCaskey teacher-facilitators and the curriculum office program coordinators for the four subjects.

10. Preparation for the program would include both staff development and curriculum development sessions conducted at McCaskey, in the curriculum office professional center and/or through external resource programs needed.

11. Evaluation of the program would be done through a variety of ways while the program is in progress and at the conclusion of the school year.

APPENDIX C

Illustration of the Correlation of Big Ideas to Common Goals

Common Goal #1

To provide students with the capacity to use background skills and knowledge to cope with existing and developing conditions and changes in life.

Communication Arts

1.* Writing is a process.
2. There are conventions common to all writing.
3. There are conventions specific to specific kinds of writing.
4. Writing reflects the mores, values and visions of the times.
5. Writing is a catalyst for change.

Social Studies

1. Events in the past have produced conditions in the present.
2. Events occurring at the present will produce effects in the future.
3. Understanding the causes and effects of past events provides a potential for controlling the future.

Mathematics

1. Mathematics is a study of patterns and relationships.
2. Mathematics is embedded in human activity.
3. Mathematics has the capacity to determine possible conditions or changes.

Biology

1. Change is a universal factor in life.
2. Interaction is a universal factor in life.

Common Goal #2

To provide students with a capacity for "personal expansion," a composite of: a sense of belonging in the universe; a capacity to enjoy and benefit personally from using knowledge and processes; and a sense of hope and optimism about life.

Communication Arts

1. Writing creates meaning.
2. Writing leads to self-discovery and/or self-fulfillment.
3. Writing engenders a sense of community.

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*Numbered items represent the "course generalities/big ideas."

Social Studies

1. Human experiences and conditions in the past can provide perspectives for understanding current events and conditions.
2. Study of past experiences and conditions shows solutions to problems common to humanity.

Mathematics

1. Understanding the structure and processes of mathematics provides a capacity to control or affect change.
2. Mathematics is the basis of many human pastimes.

Biology

1. All living organisms have structures and processes in common.
2. Understanding the structures and processes of life gives the capacity to control or produce change.
3. Living organisms and non-living matter are parts of one universal entity.
4. Understanding the relationships and interactions of living and non-living components of the universe allows for a level of control for the future.
5. Organization is a requirement for human understanding of the universe.
6. Experiences with living organisms in natural settings have the potential to produce rewarding and satisfying experiences throughout life.

APPENDIX D

Sample of Content Topics and Objectives Related to the Generalities/Big Ideas Developed for Biology

Heredity/Genetics

1. To interpret statements from Mendelian studies of heredity, using references to cell structures
2. To describe chromosomes and genes in terms of chemical units
3. To explain processes and patterns of heredity in terms of chemical units.

Genetic Engineering

1. To describe general processes of gene/chromosome manipulation
2. To explain potential changes resulting from gene/chromosome manipulation
3. To describe potential or actual consequences resulting from applying genetic technology.

Biological Control Systems

1. To explain the functions and interactions of components making up a control system including a feedback loop
2. To explain plant and animal control mechanisms in terms of particles and energy
3. To describe methods of manipulating biological control systems
4. To describe potential effects resulting from manipulation of natural biological control systems.

Ecology

1. To compare and contrast ecology and environment
2. To describe the potential of ecology in terms of short and long-term benefits.

Biomes and Ecosystems

1. To list and describe the components of a biome
2. To explain relationships among biomes, ecosystems, habitats, environments and ecological niches
3. To explain general processes which act to change environments
4. To describe and explain effects of relationships between biotic and abiotic components of environments.

Matter and Energy Relationships

1. To compare and contrast autotropic and heterotropic organisms
2. To describe the particle and energy relationships between autotropic and heterotropic organisms
3. To describe the general form of food/energy chains and food/energy webs.

APPENDIX E

Sample of Detailed Theme Outline

(McCaskey Essential Studies Initiative: Internal Working Document)

HUMAN CURIOSITY AND THE SEARCH FOR ANSWERS

Theme Generalities

A. Curiosity is natural but not always enduring. It is affected by factors in the life and environment of an individual.

B. Curiosity can produce valuable outcomes for individuals and groups.

C. Curiosity produces different kinds of questions in different people.

D. Curiosity produces questions, not answers.

E. Answers to questions are acquired and used in different ways.

Overview of Introductory Activity

The introductory activity will consist of the study of a set of narratives which describe various situations linking curiosity and answers to questions. The narratives will show a range of kinds of questions arising from curiosity functioning in different contexts, beginning with primitive hunter-gatherers and ending with high-tech systems used to monitor deep space.

Essential Questions Associated with Theme

A. Why do people ask questions and seek answers?

B. What are the most important questions people have?

C. How do people get answers to their questions?

D. How do people know if an answer is right?

E. What do people do with the answers to questions?

F. How do answers to questions affect people and other living things?

Overview of Main Activity

The basic activity will be the production of a case to justify the continuation of human life on earth. The defense of human life will be made to an alien civilization which has the capacity to destroy human life by degrading the ozone layer around earth. The aliens on the panel of judges hearing the defense will be free to ask questions and challenge parts of the defense presented. At the conclusion of the hearing, the aliens will make a decision

and report it to the group making the defense. All students in a ES team will take part in preparing the defense by studying pertinent background and processing it.

The presentation of the defense will require students to complete a number of more specific activities involving the construction of the defense. These specific activities would include many that any defense team would have to consider in preparing for a trial. Since the students will not know what it is that the aliens would find redeeming in humans, the students will have to prepare a far-ranging presentation which would be responsive to many kinds of questions and challenges the aliens might use. In general, the preparatory activities would require identification of: positive defense components; potential challenge or requests for elaboration; and suitable responses or answers to use in responding to reactions by the aliens. Additional work prior to the presentation of the defense would include planning the actual format and procedures for making the presentation.

Introduction of Main Activity

The need for a defense of human life will arise through the use of science fiction. Either an existing work or one developed for the activity will be used. Formats for the work include reading, oral presentation of literature or drama. The closing of the science fiction work will include the challenge to defend human life from destruction.

SUB-ACTIVITIES:

Sub-Activity #1

The function of this sub-activity will be to generate a set of items which will make up the basic components of the defense presentation. The items may include knowledge, processes, concepts or other human accomplishments and conditions which might make the aliens vote to continue human life.

The outcomes above will be produced by small groups of students using brainstorming/webbing activities to generate starting sets of generic categories of items. Through sharing among the groups, a single set of categories will be agreed on for work by all students on the ES team. It is expected that the list of categories will include at least the following general descriptors of human value:

1. Uniqueness of humans in terms of physical/chemical criteria and in terms of spiritual-intellectual criteria.

2. Accomplishments and future directions in the areas of: the arts, social interactions, science and technology, medicine.

3. Failures, including their causes and consequences.

The final products from this first sub-activity will drive the work included in the other sub-activities.

Sub-Activity #2

The main outcome from this sub-activity will be the parts of the defense related to the uniqueness of humans. Achieving this goal will occur through a combination of experiences involving the four subject areas. In some instances, work will be done in a singe subject, while at other times work will be general and independent of any single subject. Formats for the work will include individual, small-group and large-group arrangements.

Sub-Activity #3

This sub-activity will deal with the category of accomplishments related to human activities. The first part of the work will be that of producing examples of accomplishments in each of the subject areas. The processing activities will be done through small-group brainstorming and webbing, followed by group sharing and consensus building.

After specific accomplishments have been identified, each will be researched or otherwise studied, and the results will be presented to all students. Each study or research part will be done under the assumption that the alien jury might ask for background about the human motivation and the development of the accomplishment.

Sub-Activity #4

The function of this sub-activity will be to cover the category of failures in the same way that accomplishments are covered in sub-activity #3.

Sub-Activity #5

Basically, This sub-activity is a review of the work done in the preceding sub-activities. Small groups of students will present summaries of sections of work, and other groups will question the presenters or critique the work. The point of the activity is to identify weaknesses or deficiencies of information related to the background material to be used in the defense.

Sub Activity #6

This sub-activity will be the preparation of the defense case by a selected group of students to represent the whole team. The preparation of the case will be governed by the following rules:

1. The team of students may designate five students as their defense team. The aliens will randomly select five more students to make a total of ten to present the defense.

2. The ten students will have a period of no more than 45 minutes to make the presentation to the alien jury. Following the presentation, the aliens will have a maximum of 60 minutes to ask questions and make comments.

3. A decision from the aliens will be given the following day. The verdict will be explained, and team members will have a period of no more than 45 minutes to appeal or otherwise respond. The aliens will

then meet to decide whether or not to modify their decision. A final announcement from the aliens will be made immediately after their meeting.

4. The presentation of the defense and all other facets of the trial will be done with all members of the CES team and invited spectators present.

The defense team would plan the format and logistics of their defense and identify any materials or further information that might be needed. Once such needs were identified, other students could find materials or background for the defense team to use. A dress rehearsal would be done for critical review by the whole team.

SUB-ACTIVITY EXPANSIONS

Sub-Activity #1

A suitable introductory story or other presentation will have to be found or produced. Whatever is used, it will have to be well done and presented in a way that has some aspect of reality to it, although it will be science fiction. It will be very important to associate the alien threat to something that is relevant, the degradation of the ozone layer, for example.

Sub-Activity #2

This sub-activity is a study of what it is that makes humans unique among all living organisms. To show the uniqueness requires comparisons between humans and other life forms. The comparisons could include structural, process and behavioral/intellectual references. In general, these comparisons would tend to show that human are more like other living organisms than unlike them, until the point of intelligence becomes the focus. From the standpoint of the alien interest in humans, differences related to structure or process might not be important; however, the capacity to think and act from thinking would be of significance. Working from this point of view, part of the background development for the activity can be described:

1. A short, general study of representative groups of plants and animals would be done. The study would bring out the basic concept of cell theory as a unifying dimension of life.

   Working from the cell theory, student would move quickly through a survey of life forms so that a selected number of key groups would become examples to show increasing complexity and diversity, based on structure. In the course of this survey, a brief introduction to classification would be included to make needed comparisons; however, the main focus would be on groups of vertebrates.

2. To develop the needed comparison involving thinking, other processes associated with life would have tc be included. As in the case of structure, this study would deal with those processes common to life forms but emerging in complexity through animal and plant groups. The processes would not need to be studied in detail, only enough to describe them in terms of function, input and output.

3. The results of 1 and 2 above would tend to show that the unique nature of humans lies in complexity of structure and processes. The assumption could be made that the aliens would not place a high value on that kind of difference and would be looking for something more. Thus, a further look at humans in terms of behavior and intelligence would be needed.

   This study should be another general comparison survey in which some of the representative life forms already studied in terms of structure and processes would be compared behaviorally at this time. Introduction to behavior would cover stimulus-response, instinct and higher levels, culminating in thinking. Each of the behaviors used in the study would be covered in only enough detail to make the comparisons called for. The final "behavior" required to show humans are unique would be the exercise of conscious control over other forms of life.

4. From a different perspective, the uniqueness of humans can be seen as a kind of accomplishment, resulting from the exercise of structure, processes and intelligence. Such an accomplishment is the capacity to communicate through language in different forms. Comparisons between human language and communication by other life forms would be included in this overview. The emphasis, however, would be to show that what humans use language to express reflects something other life forms probably do not experience.

   Written, numeric and visual expressions would be included in the study through the use of appropriate examples. Selected prose and poetic examples, mathematical expressions and a number of visual pieces could show the variation of messages conveyed through the language formats. The point would not be to study any representative selection in detail; the point would be to show that human have a capacity for expression and a need to express things that arise from their unique ability to exercise intelligence.

Sub-Activity #3

The overall function of this sub-activity is to generate background related to major accomplishments humans have produced. The selection of the accomplishments will drive the activities required to provide the necessary background. For planning purposes, some significant categories of accomplishment should be identified and prepared for in terms of developments in classrooms. Specific examples of accomplishments within the categories might also be identified, although student input should be included in the selections somehow. For the purposes of planning and preparation, accomplishments could be categorized as follows:

EXPRESSION

- Language
  - Verbal
  - Numerical
- Art
  - Fine and Graphic
  - Performing

SCIENCE/TECHNOLOGY/MEDICINE

Conceptual
Physical/Material
Process

SOCIAL/CULTURAL/INTERPERSONAL

Political Systems
Governmental Systems
Judicial Systems
Social Systems
Religious Systems

Choice of examples would be made so as to give an appropriate overview of accomplishments, although detailed studies of most examples would not be required. An example would not necessarily have to be included from every topic or sub-topic shown above. Additional activities required are described in the following items:

1. The use of mathematical expressions to describe ideas and produce answers would be an important part of the overall sub-activity. A selection of examples would be made so that a range of uses would be represented. Relationships between verbal expression and numeric expression of the same idea would be important to show.

2. Literary examples of expression covering several forms would be studied to show how a central question or theme can be treated in those different forms.

3. As a complement to the study of literary examples of expression, artistic examples of different types could be studied to show how the literary themes are treated in art. As used here, art would include performing and fine art.

4. The category of Science/Technology/Medicine would be handled through general treatment of just enough key outcomes to satisfy the need. The examples would illustrate some of the motivations introduced in the opening activity for the theme. In addition, the examples should show the dimension of power the achievements have to be useful in improving the human and non-human conditions. A set of such examples would be:

   Matter-Energy Equivalence
   Germ Theory of Disease
   Structure of DNA
   Invention of Printing Press

   Whatever choice of examples would be made, they would be studied in only enough detail to provide understanding of their meanings and their effects or potentials. The examples are needed as part of the overall presentation to the aliens and should be studied in enough detail to satisfy that requirement. Some of the same topics may be studied in different contexts and detail in later themes.

5. The interpersonal kinds of accomplishments need to have a context set for them before they are studied separately. Therefore, it would probably be appropriate to do a very general study of the changes that occurred from early civilization to the present, the goal being to show that forces of various kinds led to needs for order and/or control.

6. The systems of order and control produced by forces in civilization are a general category of accomplishments by humans. Understanding the systems might best be accomplished by making comparisons among existing systems. Therefore, a choice of example would have to be made as the focus for study. It would make sense to use some existing systems in the United States as models for the comparisons. Some possibilities would include: social security system, free enterprise, judicial system, governmental/political structure.

   The essence of each general component would be studied enough so that its counterparts in other nations could be identified, compared and contrasted. Part of the essence of social institutions or programs is the underlying concept of human life on which they are based. That is, part of the comparisons of human societal systems must include an aspect which is probably best indicated by the term religion. This is not to suggest that comparative religion should be studied as a topic. The point is to show that there is a relationship between social systems and the way people in a country perceive human life and place a value on it.

Sub-Activity #4

This sub-activity could be thought of as a gamble to use in the presentation to the aliens. That is, failures might be regarded as a weakness by the aliens and be counterproductive as part of the defense. On the other hand, if the aliens asked questions and discovered failure that had purposely been hidden, the aliens might think even worse of the defense. "To err is human," has to be considered in both contexts. To admit that humans err, but that the errors can produce positive results could be a strong part of the presentation, provided examples of failure are carefully selected and show positive outcomes.

Since the point of this part of the presentation is to show that human do fail sometimes but can respond in positive ways, the number of examples would not have to be large. The examples should probably deal with general, not narrow, specific cases. For instance, the Civil War in America represents a general kind of failure in humans, while the TMI incident represents a specific kind of failure. It might serve the case in the presentation to cite the Civil War as an example of human failure that eventually became a source of overdue benefits to people. The goal will be to show that humans have learned from failures, although failures may continue to occur.

Another broad example of failure or mistake would be the indiscriminate use of chemicals as herbicides and pesticides during the years immediately after World War II. Ignorance of the potential these chemical agents had to alter environments and affect life forms led to conditions worldwide that finally were recognized as general threats to all life. The environmental movement emerged from that time and continues to expose more and more conditions that show

interrelationships among all living and non-living components of the universe. Ecology, a subject unknown to most people, emerged as a force in human life. Even though environmental degradation may be continuing, awareness of the potential humans have to use new knowledge to manage environments can be seen as a positive result arising from past mistakes. In addition, an embryonic ethical conscience of environments and ecological relationships could be cited as a new condition in human life.

If the two examples above are used as the basis for this sub-activity, the following additional background steps would be needed:

1. A general study of the root causes of the Civil War. Since there is a possibility of covering the same topic again in another theme study, the time used at this time might be short.

2. A general study of the outcomes of the Civil War as they relate to awareness of civil rights and to subsequent actions stemming from the awareness. Again, for the purpose of this theme, the study can be kept short.

3. A study of one or two hydrocarbon-derived insecticides would suffice to give a second broad example of mistakes or failures by human. Included in this study of insecticides could be:

   A. Overview of the nature of food chains and food webs
   B. Comparison of natural and synthetic substances
   C. Nature of ecology as a field of study
   D. Origin of hydrocarbon-based insecticides
   E. Reasons for use of insecticides
   F. Means by which dangers of insecticide use were discovered
   G. Examples of misuse of chemical agents
   H. Beneficial outcomes from awareness of misuse and effects

   It is obvious that the list above includes topics which could be the basis of a whole course of study. The effort should be to provide only a broad picture of this example of misuse. Some the same topics may be included in the study of other themes during the year.

4. A list of additional examples of general kinds of mistakes or failures would be developed as possible backup use during the presentation of the defense. The list should include items which represent other categories of human endeavor.

Sub-Activity #5

By this point in the study of the theme, background knowledge will have been developed, along with a sketch of what kinds of items will be put into the defense presentation. This fifth sub-activity would be used to process the background so that it would fit properly in the presentation and withstand challenges that might occur. The following actions should be considered in working on this sub-activity:

1. Since the defense presentation is similar to a trial, familiarity with a court trial would be important to include. This background could be

produced realistically by way of the Mock Trial activity available through the Bar Association.

2. Review teams of students and teachers would work on sections of the presentation to generate sets of questions which might be asked during the presentation to the aliens. The study groups would also develop appropriate answers to the questions.

3. Questions generated by the teams of students would be used in a large-group setting for critical review. Various formats could be used for this review, one of which follows:

   Four teams of ten students would be formed. The questions produced by the teams would be asked in sequence in a College Bowl format. Answers would be judged by the students in the audience. Disputes about answers would be settled by discussion or arbitration or through assigned research.

Sub-Activity #6

Preparation of the actual presentation and its delivery are included in this sub-activity. The following actions would have to be considered:

A. Selection of the presentation team. The five members chosen by the students could be identified by election, assignment or by volunteering. In any case, the total team should be involved in the choice of the team.

B. Following selection of five students by the team, the remaining students on the whole team would be the pool from which a random choice of five would be made by the aliens. The aliens, once identified, would make their choices using a system they agree to use.

C. The defense team of ten students would meet to plan the presentation. The planning would identify any resources, materials or further background needed. Other students on the total team could take care of these needs for the defense.

D. A dress rehearsal would be useful and could be done in front of the whole team, as a way of getting any final input which might point out weaknesses in the defense.

IMPLEMENTATION SCENARIO

Introductory Activity

The Introductory Activity for the theme could be done without subject area distinctions. That is, the background to be developed by using the set of stories is not specific in terms of a particular subject. Therefore, students could study the set of stories with help from any of the ES teachers on the team. Each teacher, however, would have to be prepared to deal with the stories and their follow-ups in a consistent way. Possibly, groups of students could work with a given teacher for a full day at a time, rotating among the teachers over a period of four days to complete the work. This would mean that the

stories could be divided into day-long study units and all work would be finished in four or five days. When written, the stories were designed to be done in sequence. However, if the teachers felt that the sequence could be disregarded, a given teacher could specialize in a certain story or two as the students rotated through the team of teachers. Another option would be for each teacher to deal with the whole block of stories with a single group of students.

The study of the Introductory Activity should not begin with the Theme Generalities already stated. The activity is included in the theme to serve as a focal point for students to use in identifying the generalities for themselves. The final part of the work on the Introductory Activity should be the development of a set of generalities. The generalities produced during the development work on curriculum were written to serve as guidelines for teachers to use in planning for coverage of the theme. The expectation is that the generalities the teachers and students produce together will be similar to the guideline set. This expectation is based on the assumption that teachers were astute in the curriculum development process and anticipated accurately what students would identify. Help and guidance teachers give during study of the Introductory Activity should closely guarantee congruence of student generalities with the teacher set.

Prior to the beginning of the Main Activity, the Essential Questions related to the theme need to be written. What is stated in the preceding paragraph about generalities is equally true about the Essential Questions. The point is the Essential Questions which the whole theme deals with should be very close to those developed by teachers as the curriculum was written. Several of the Essential Questions can be answered in part by the studies of the set of stories; others will be answered fully by way of the study of the Main Activity.

Main Activity

Introduction of the Main Activity will have to be done carefully in order to avoid having the students take it less seriously than needed. If a dramatization is chosen as the format for introduction, the whole team of ES teachers and students could meet together. If a story or fabricated communication from aliens is used, smaller groups might be a better way to handle things. It is going to take the skill and understanding of the students to made the introduction acceptable.

Sub-Activity #1

Following the introduction of the Main Activity, the first step to be taken by Sub-Activity #1 is a listing of components to be included in the defense to be presented to the alien jury. This outcome can be met by using small groups of students, using brainstorming, webbing and consensus-building actions, and then combining the products to form an ES team list of components. The work could be done without regard to subject areas, that is, any ES teacher could work with any small group of students to do this, since the components of the defense would be generic, not specific.

Sub-Activity #2

The uniqueness of humans will be developed in terms of the general areas of reference: physical/chemical and intellectual/aesthetic. The first of these

can best be addressed through studies related to the science component of ES, Biology. The second area can fit within any of the four subject areas and could even bring in contributions from subjects outside the four subjects in ES.

For the purposes of studying the theme, it will be better to identify a limited number of aspects of uniqueness, rather than attempt to develop a very comprehensive view. For instance, uniqueness could be defined well enough by using examples from the following areas of study:

A. Physical/biological/behavioral
B. Social/cultural
C. Expressive/communicative

The areas could be studied to create descriptions of examples which show how humans are unique within each area. The studies could occur concurrently, using full-length ES periods daily and using a rotation of small groups within the four content areas. If three full days were spent in each area of study, the equivalent of 12 conventional periods of instruction would be available. During such instructional blocks, the work could be done more intensively than in conventional schedules and, also, kinds of activities that consume large blocks of time could be implemented.

Sub-Activity #3

Accomplishments can be confined to examples related to the three areas of study identified for use in Sub-Activity #2. The basic objective would be to show how the unique capacities of humans were used to produce various accomplishments. A limited number of examples, carefully chosen, would produce this outcome without consuming inordinate amounts of time. The selection of examples would have to be based on their capacity to be useful in a broad sense. For instance, the alucidation of the structure of DNA in biology is not only an illustration of an accomplishment in and of itself. The ramifications of understanding the DNA structure go far into other areas of life, even serving as a basis for identifications in courts of law. The search for examples in all subjects should be for powerful cases with broad applications.

As the examples of accomplishments are studied, emphasis should be placed on the motivations leading to the accomplishments and the processes which produced them.

A format for study similar to that described earlier for Sub-Activity #2 should be considered here, too. For general planning purposes, three-day blocks of work for student groups would allow for as much as nine hours of work in a given area of study.

Sub-Activity #4

In this sub-activity, it is possible that some subject areas will not be sources of examples. This is because the kinds of failures needed as examples are not failures in the use of skills. They are failures in using or not using knowledge derived from searching for answers. The examples should be associated with humans in a collective sense, not with individuals. Errors or failures that cultures or political units produced would be the kinds to consider. It is

even possible that a single example from just one of the four subject areas might suffice for the whole sub-activity. A format that might work if more than one example is included would be to study an example from science/technology and one from social studies, using the subject-area teachers for this work. While the subject-specific examples were being studied, work could be done in communication arts and math that would be complementary or that would develop skills that would be generally useful throughout the year.

Assuming that the study of examples of failure would not be extremely detailed, a possible schedule for the work would be:

> Over a period of five days, the four groups of ES students would spend one of the days entirely in biology and one day entirely in social studies, as a way of introducing the basic background of the examples. While the groups are spending these two days in biology and social studies, the other groups would have two full days of work in communication arts and math, as much as possible related to what was happening in biology and social studies. The fifth day would be used to process the study of examples, by having the student groups rotate through sessions with the four teachers.

Sub-Activity #5

This sub-activity would serve to review the work done up to this point and provide the defense team with things to consider and prepare for. The work done in the sub-activities up to this point would have been done by all students on the ES team; therefore, the review and questions for the defense could be done with the help of any of the ES teachers. All students on the ES team would be expected to be knowledgeable in a general way, the same should be true of the ES teachers. Simply put, this sub-activity could be managed without separating students into groups according to subject areas. It could probably be completed in a maximum of two full days of work in the ES schedule. If a large-group activity is included, another day or part of a day might have to be scheduled.

Sub-Activity #6

The presentation of the defense and follow-ups to it should take the equivalent of one full day of ES scheduling

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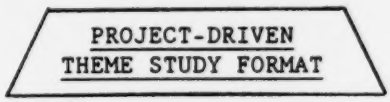
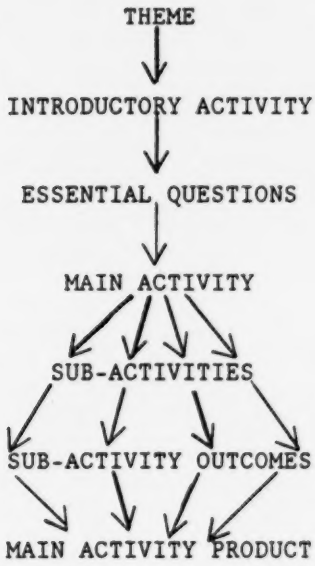
Note: The sample detailed theme outline presented in this appendix constitutes an **"internal working document"** prepared collaboratively by district curriculum and ES teaching staff. It was not intended as a "stand-alone" piece, per se. Its development involved substantial discussions among district curriculum and ES teaching staff. It does convey, however, the thought processes involved in McCaskey's development of theme-based interdisciplinary curriculum.

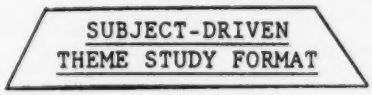
It should also be noted that at the point of classroom implementation of the theme, it is up to the ES teachers to choose from and develop the various content and implementation alternatives/suggestions in order to bring the study of the theme to life. In essence, the "theme outline" serves as a "general roadmap" or "advance organizer" for their implementation of the theme, and many decisions remain to be made at the actual point of classroom implementation.

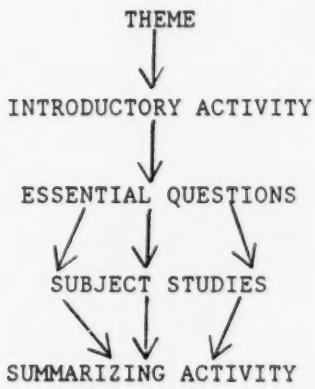
APPENDIX F

Schematic of Lancaster's Two Design Formats for Theme Study-Based Curricula



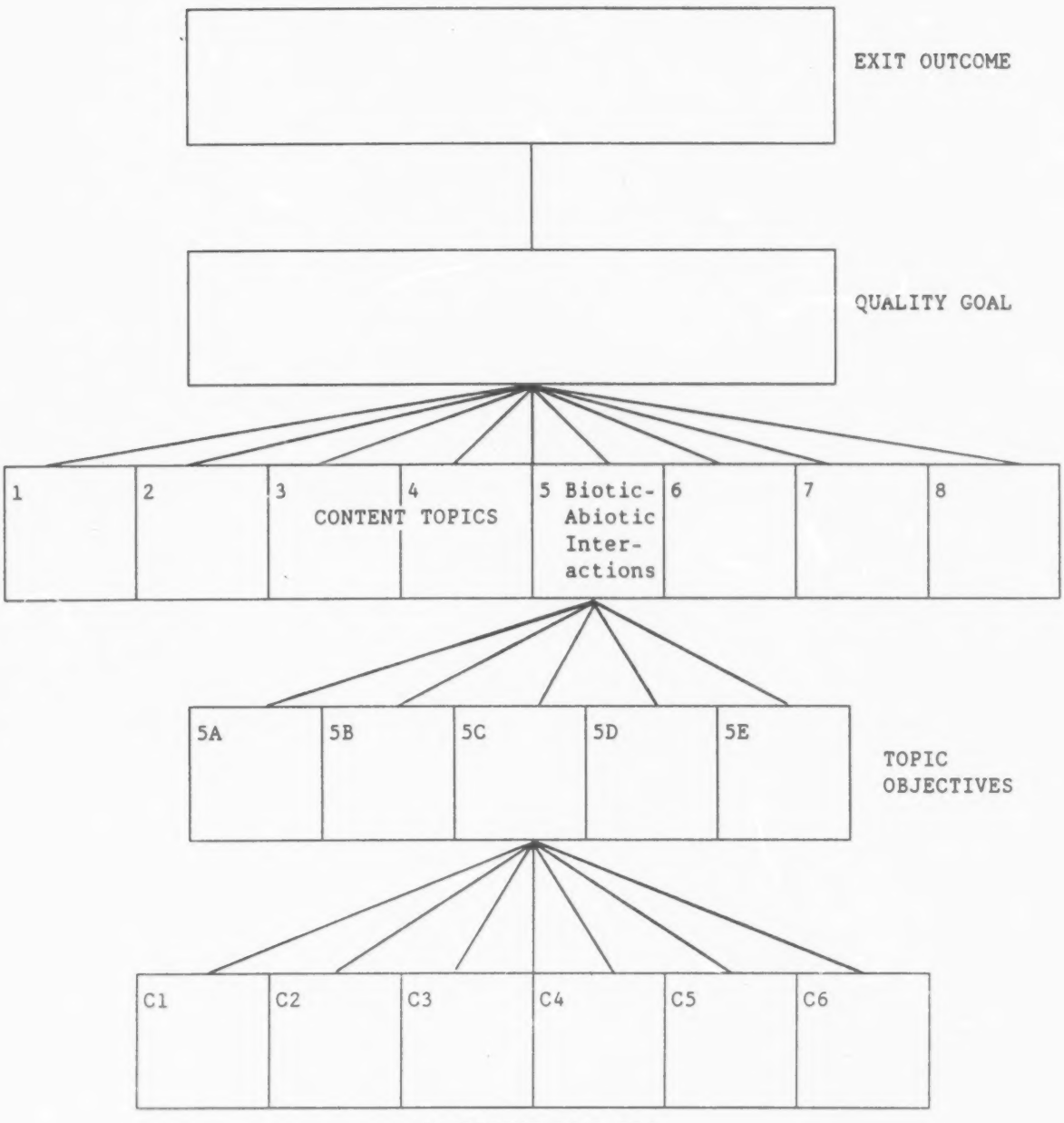






APPENDIX G

Schematic of Planning Down Framework



APPENDIX H

Planning Down Reference Sheet

Exit Outcome - SOLVE ALL PROBLEMS AND MAKE ALL DECISIONS BY COLLECTING AND PROCESSING SUFFICIENT RELEVANT INPUT.

Quality Goal - Environment and ecology. Each student shall understand the environment and the student's ecological relationship with it in order to develop attitudes and behaviors necessary for maintaining the quality of life in a healthy and balanced environment.

Course Topics -

1. Energy and Material Cycles
2. Life Processes
3. Ecology
4. Biomes and Ecosystems
5. BIOTIC-ABIOTIC INTERACTIONS
6. Matter and Energy Relationships
7. Environmental Issues
8. Biotic and Abiotic Environments

Topic Objectives -

T5-A. To describe specific matter-energy sources required to support organisms in general or specific environments.

T5-B. To describe short- and long-term abiotic effects related to activities of organisms.

T5-C. TO DESCRIBE ROLES OF ORGANISMS, ABIOTIC MATTER AND ENERGY IN SPECIFIED NATURAL CYCLES.

T5-D. To describe short- and long-term biotic effects related to changes in abiotic components of environments.

T5-E. To describe potential actions designed to provide safe and fulfilling environments.

Objective Enablers -

C-1, C-2, C-3, C-4, C-5, C-6

APPENDIX I

Draft Proposal for Restructuring
Millersville's Secondary Education Program

I. BELIEFS (Rationale)

We believe that as we move to the restructuring of public schooling for the 21st century, several clear imperatives face teacher educators:

- Future teachers must understand the interdisciplinary nature of the knowledge needed for living in a complex world. This requires a curriculum which articulates interdisciplinary linkages in general education, specialty field studies, and professional coursework.

- Future teachers must understand the integration of content and method in teaching. This requires university-wide responsibility for the preparation of teachers.

- Future teachers much be able to interrelate the theory of learning and instruction with the practice of teaching. This requires early, structured field experiences and on-going and sustantive partnerships between teacher education programs and public schools.

- Future teachers must pay attention to the needs and success of ALL learners. This requires a curriculum which incorporates both the content and pedagogy necessary to recognize and assess the impact of cultural differences, racial differences, physical differences, socio-economic differences, learning capability differences, and emotional differences in our students.

- Future teachers must acknowledge all learners as architects of knowledge and therefore as active participants in the learning process. This requires the employment of pedagogical strategies which require future teachers, and in turn, their students, to take responsibility for their own learning.

- Future teachers must be capable of making decisions which are professionally complex and moral in nature. This requires a thoughtful and reflective approach to practice and a clear recognition of the moral dimensions of teaching.

II. THE BASIC DESIGN

A. THE FRESHMAN YEAR: PROFESSIONAL ORIENTATION

Teaching as a profession; Teacher as decision maker and reflective practioner.

This experience would include a three credit orientation to the profession which would also include a pedagogy seminar and the coadvisement process.

A case study investigation would provide the conceptual hook by which students would come to understand the essential questions which guide teacher education and practice.

Students would begin the planning for a career in teaching through knowledge of the requirements (GPA, Act 34, etc.,) and would begin their portfolios in preparation for their graduation exhibitions.

B. DEVELOPMENTAL REQUIREMENTS BETWEEN THE FRESHMAN AND SOPHOMORE EDUCATIONAL FOUNDATION COURSES:

1. Each student will demonstrate computer literacy by testing out through a mastery demonstration or begin a tutorial process by which they can demonstrate mastery of basic computer literacy skills.

2. Each student will complete a library orientation competency which will include an introduction to ERIC.

3. Each student will complete a media orientation which will include competencies on the overhead projector, etc.

4. Each student will have successfully completed the prerequisites of Psychology 101 and Cultural Anthropology.

C. THE SOPHOMORE EDFN EXPERIENCE
THE SCHOOL, THE SOCIETY, AND THE LEARNER

This is a six hour combined block with a required additional twenty hour field experience in collaboration with the School District of Lancaster which will include observation and tutoring.

Cohort groups of students will be established with the intention of these groups working together when possible through student teaching.

Videodisc technology and videolinkage with the school district classrooms will provide additional live and simulated classroom observations.

Course Topics:

Learning theories
- Developmental theory (esp. re adolescents)
- Cognitive theory
- Social learning theory

Learner differences
- Exceptional students
- Culturally different students
- Individual needs
- Learning styles

Assessment
Objectives
Motivational theory/strategies

Learning environments
How materials/media shape learning
Goals of public schooling
Politics of learning
Social/anthropological/cultural considerations
Equity issues
School structure affecting learning
Ethical decision-making
Professional literature literacy

Infused in course through assignments, methods, etc.:
Group decision-making
Group dynamics
Self-awareness, confidence
Reflection on practice
    Teaching as intellectual experience
    Teaching-learning process
    Transition from learner to teacher
Life-long learner/interesting person
Modeling excellent instruction

Infused in field experience through assignments, placements:
Assessment of individual needs (esp. exceptional students)
    Cognitive, social, economic, cultural concerns
Cultural diversity

Integrated with other coursework:
Learning styles
Assisted interpretation ("reading") of information in the field
Group dynamics
Disciplinary expertise
Self-awareness

Program Design:

1 90 min. large group (90 students) instruction/week

2 90 min. small group (15 students) sessions/week devoted to case studies in support of the large group instruction topic

1 60 min. small group session/week devoted to specific student activities (portfolio development?): learning journal for liberal arts course, educational autobiography, learning styles inventory, Myers-Briggs?

Portfolio/Assessment:

1. All students will teach a concept to a cohort group based on models and reflective practice. A departmentally standardized format for instructional design will be followed through the student teaching experience. This will be videoed. Experience may be based upon the assessment system developed by MU, IUP, and Shippensburg.

2. Field evaluation and block professor recommendations.

3. Library/Media/Computer literacies

4. Self assessment of teaching capabilities

D. THE JUNIOR YEAR: THE TEACHING/LEARNING PROCESS. KNOWLEDGE AND PEDAGOGY, CONTENT AND METHOD. THE LINK WITH THE LIBERAL ARTS.

This will be a six hour block of Instructional Design I & II with a focus on special methods.

Students in cohort groups will meet with members of the liberal arts faculty, the teacher education faculty including media/technology experts, and public school scholars in residence under a "center for pedagogy" concept. Pedagogy will be modeled and discussed. Students will work to design integrated, disciplinary instruction with multimedia under the guidance of faculty.

Field experience will include some early classroom observation of school sites and two Theme Days at two different school sites within a two to three week span. During a Theme Day, a group of 2-3 students will assume the daily class load of one teacher at the school site and will take turns teaching the instruction planned in the "pedagogy center." Each student will have at least two classroom teaching experiences and will reflect upon their practice upon returning to the university in the center.

Course Topics:

Decision-making: individual, group, ethical
Group dynamics
Leadership
Continued professional socialization
Extent and limits of professional responsibility
Legal issues
Disciplinary expertise
Pedogogical content knowledge
including the application of all learning theory topics: planning, managing instruction, discipline, effective teaching, instructional design, approaches to teaching and their effectiveness with different student populations, evaluation, assessment, evaluating and selecting media, encouraging student participation
Curriculum development
Philosophies of Education
School structure and politics

Infused in course work through assignments, methods, etc.:
Transition from learner to teacher should be completed by junior year
All items listed should be applied and then analyzed/reflection

Infused in field experience through assignments, methods, etc.:
All of above (processing, debriefing, analyzing)

Integrated with other coursework:
All of above (using a three member team)

Portfolio/Assessment:

1. Faculty recommendation

2. Prepared instruction

3. Self Assessment

E. SENIOR PRACTICUM. PROFESSIONAL SEMESTER
INTEGRATION OF METHODS AND ON SITE TEACHING PRACTICE

Each secondary education practicum-teacher will have two days of orientation to classroom teaching prior to their student teaching assignment and will return to the university, one day a week for the first eight weeks of student teaching, for a total of eight full days of integrated methods. During this time, instructional planning and strategies, classroom management and organization, innovative techniques and effective practice, etc. will be modeled by teacher education faculty and developed in cohort groups by secondary education practice teachers. Students will plan and prepare the instruction for their two weeks of full teaching load.

The practicum will conclude with an "exit day" of processing the secondary education program and practicum and a celebration.

Exhibition/Assessment:

1. Field Service evaluation

2. Professional preparation of program portfolios/documents for career application.